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ABSTRACT

This study examined sources and occupational consequences of utilizing alternative educational patterns in a nationally representative sample (Retrospective Life History Sample) of black and white men. The study explored patterns of educational activities used, the antecedents of the use of alternative normative patterns, and occupational effects of using alternate educational routes. A significant fraction of both black men (41%) and white men (59%) did not follow the assumed pattern of continuous full-time schooling followed by labor market entrance. Instead, full-time schooling interruptions and part-time schooling resumption were prevalent for both groups. Important in explaining full-time schooling interruptions are amount of school completed and credential status attained. Part-time work experience was important in predicting the use of a continuous school pattern for whites only. Resumption of education part-time was found to be predicted by educational attainment and credential status for blacks and whites. Ability, however, was positively related to just blacks' part-time educational pursuits. In considering occupational effects of pursuing alternative educational routes, occupational and educational changes during the first decade of labor force experience were included. Positive occupational effects of interrupting schooling were documented for whites, but not for blacks. Black/white differences in educational activity patterns and their sequences were seen as potential sources of racial differences in educational pay offs. (Author/CSS)

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Center for Social Organization of Schools
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U S DEPARTMENT OF HEALTH,
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Abstract

This report examines the sources and occupational consequences of utilizing alternative educational patterns using a nationally representative sample of black and white men (the Retrospective Life History Sample). It describes the patterns of educational activities used, the antecedents of the use of alternate/normative patterns and occupational effects of using alternate educational routes.

Although present views of the transition of education to work suggest this is a clearly defined event, this report documents that such a view vastly simplifies the actual transition process. A significant fraction of both black men (41 percent) and white men (59 percent) do not follow the assumed pattern of continuous full-time schooling followed by labor market entrance. Instead, interruptions in full-time schooling and resumptions of schooling part-time are prevalent for both blacks and whites.

A central factor in explaining the interruptions in full-time schooling is the amount of schooling completed and credential status attained. Part-time labor force experience was also important in predicting the use of a continuous schooling pattern for white men, but not for black men. Resumption of education via part-time schooling was found to be predicted by educational attainment and credential status for both blacks and whites. Ability, however, was positively related to part-time educational pursuit for black men only.

In considering the occupational effects of pursuing alternative educational routes, the usual formulation of education to work had to be respecified to incorporate full-time schooling interruptions and part-time schooling resumptions. In this respecification, then, we included both occupational and educational changes during the first decade of labor force experience. Positive occupational effects of interrupting schooling were documented for

whites, but not blacks. Different racial patterns in the effect of part-time education were detected as well. White men appeared to accrue occupational benefits from any part-time activity while blacks benefitted only from degree-oriented courses.

The black/white differences in the patterns of educational activity and the consequences of these patterns were seen as potential sources of racial differences in pay offs to education. Other explanations for the racial differences were briefly explored as well including omission of labor market experience as a variable which differentially conditions the effects of education and the failure to consider the nonlinear relationship between education and occupation.

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Overview

The association between educational and occupational attainments constitutes a central element in our views of the process of status attainment in American society. Yet, despite the centrality of this relationship for our theories of adult achievements, important theoretical and empirical issues concerning this association have yet to be systematically addressed. In this report, we address several of these problematic issues in current views of the transition from education to work. The issues addressed here are by no means exhaustive, dealing primarily with questions of the effects of various patterns of sequencing and timing of educational and occupational events and with explorations of sources for racial disparities in the educational occupational association. Despite the apparent narrowness of this focus, these explorations touch upon and hopefully inform issues of more general concern, in particular the role of education in perpetuating/reducing existing occupational inequalities.

Our present models of the status attainment process examine the dependence of educational attainments on family background factors and the subsequent influence of educational achievements on career outcomes. In these models, educational attainment plays a central role, mediating the effect of ascribed to achieved statuses. Educational achievements have direct consequences for both first and subsequent job attainments. In estimating the importance of these factors for career attainments, educational achievement is conceived of and measured as an event occurring prior to occupational experiences. That is, the temporal ordering implicit in these models is that individuals go to school, earn a credential, leave school and go to work.

For many Americans, this assumption of a straight line progression from education to work is an oversimplification. Census data indicate that about five percent of persons aged 18-35 are still completing their high school education (1970 Statistical Abstract: Table 15). One survey of participation in adult education (Johnstone and Rivera, 1965) found a substantial proportion of Americans (47%) involved in continuing education at least once. In an analysis of educational activities of a national sample of men aged 30-39 (Karweit, 1977), a significant percentage of both black (40.2%) and white (57.3%) men were found to have resumed schooling in some form after entry into the labor force.

It appears then that for many Americans, educational experiences do not stop once work is begun, but instead are combined with labor force participation in varied ways (e.g. part-time education and full-time work or alternating periods of work and schooling). Consequently, measuring attainment at a single time point, i.e. prior to entrance in the labor market, misrepresents the actual education attained and its subsequent influence on occupational outcomes for the many persons who do resume schooling. Furthermore, because continuing education may be used disproportionately by certain subgroups of the population (e.g. women), the error in measurement may affect the estimates for some groups more than others.

Of particular concern here is whether the finding of lower rates of return for education for black men is related to racial differences in the pattern of educational attainments. Various mechanisms usually broadly construed as evidence of labor market discrimination have been invoked to explain this finding. Little systematic research has addressed the issue of whether the method of attainment itself might be related to these differences. In other words, it may be the case that blacks and whites not only differ in level of attainment, but in how that level was attained and that the differences in the method of attainment are important as well for career outcomes.

Besides increasing the validity of the measurement of educational attainment, an analysis of the determinants and occupational effects of alternate educational routes would help increase our total understanding of the role that education plays in the status attainment process. For, continuing educational activities, whether they produce an upgrading of educational attainment levels or not, have been shown to have occupational effects. Coleman et al. (1972) found that continuing educational activities were the single most important intervening factor in explaining occupational prestige differentials in the first decade of labor force experience. Whether continuing education is important because of vocational skills learned or because participation in education indicates some occupationally useful quality of the individual is unclear, but examing the types of courses taken and the occupational benefits accrued should inform this discussion.

Moreover, given the current interest in alternatives to the full-time schooling regimen and the many proposals for recurrent and continuing education programs, documentation of existing alternative educational patterns and their occupational and other effects could provide important information as a basis for policy decisions.

The occupational effects of continuing education have received little detailed consideration (but see Coleman et al., 1972; Duncan, Featherman and Duncan, 1972; Featherman and Carter, 1976 for partial exceptions). Whether this lack of interest in the role of continuing education reflects substantive or data-availability situations is not clear. Substantively, the viability of the assumed ordering of education to work (and not work to education) has not been challenged although this ordering ignores involvement by many Americans in continuing education and the existence of interrupted schooling patterns (Eckland, 1964). The lack of representative data samples containing educational and occupational histories is another significant deterrent to examining the effects of continuing education. However, detailed longitudinal data sources are available (e.g. the Retrospective Life History Sample (LHS) collected at The Johns Hopkins University and the National Longitudinal Survey data) with which a study of the role of continuing education in the attainment process can be undertaken.

In the present research endeavor, the primary data source will be the Life History Sample. This unique data source, collected at the Johns Hopkins University in 1968, contains complete educational, occupational, marital and residential histories for a representative sample of males, aged 30-39. These histories were collected retrospectively from the time the respondent was aged 14 until 1968. Details of his family of origin were also obtained. For each life area (education, occupation, residence and marital history), all events from the respondent's fourteenth birthday until 1968 were recorded as well as the month and year when a change in that life area occurred (e.g. a job change). A unique computer storage and retrieval system was developed for use with these data.

The life history data will be used to address several issues which are important for understanding the interplay between education and occupation. First, we examine whether the usual perception of educational attainment as the result of continuous full time enrollment is indeed appropriate. In this examination, we document the patterns of educational involvement of the men in the life history sample. Besides the more narrow view of education as "years of school completed," this discussion focuses on how the educational attainment was achieved. Type of schooling, whether full-time or part-time, continuity and duration of schooling are all factors which are considered in describing the educational careers of the men in the sample. In sum, the first issue then is concerned with enlarging our present view of the nature of educational activities by focusing on the sequencing, duration and timing of various forms of educational involvements.

Second, we wish to understand why individuals follow the particular educational patterns that they do. Of particular interest is an understanding of why black and white men appear to follow quite different educational routes. Here, we are concerned with the effect of family background characteristics, primarily with the economic situation, and how these might dictate or permit the pursuit of specific educational patterns. Labor market conditions, specifically youth unemployment rates are also considered here. Situational factors, such as being drafted or marrying prior to completion of schooling are examined for their effect as well.

Perhaps the most interesting question is whether or not patterning educational pursuits in an alternative fashion makes any difference in an occupational sense. This question is addressed by considering the pay offs to education attained in alternate ways. Besides considering the typical definition of occupations according to their prestige and income, we focus here on other characteristics of the job, namely the characterization of the work environment according to Holland's (1973) scheme. The reason for considering a broader range of job characteristics is simply that individuals who resume education may have several occupational motives in mind, prestige and money being only two possibilities.

Organization Of This Report

This report is organized in six main sections. Part 1 contains a review of the relevant literature in the area of education-work linkages, a statement of the goals of the present undertaking, and a description of the Life History sample and data. A codebook for the data and description of computer procedures are provided in technical appendices A and B. Part 2 describes the patterns of educational activities employed by the men in this sample, especially with reference to their labor force participation, their race and educational attainment. Part 3 discusses the antecedents of interruptions in full time schooling; Part 4 carries out this discussion for utilization of part time education. In Part 5, we will assess the occupational effects of pursuing education by alternate routes. The central focus of this section is whether there are differential occupational payoffs associated with alternative educational patterns. Part 6 is concerned with more general issues of educational payoffs to education and in particular racial differences in those payoffs.

I. Education and Work

A. Present views of educational and occupational attainments

Educational attainments play a major role in determining life chances and occupational statuses. This education-occupation association has been amply and consistently documented (e.g. Blau and Duncan, 1967; Duncan, Featherman and Duncan, 1972; Sewell and Hauser, 1975; Ornstein, 1976). Because educational attainment is also associated with characteristics of one's social origins, students of status attainment have attempted to determine how educational attainments, net of these social origins, influence status attainments. In these determinations, status attainment is viewed as a process in which one's experiences and activities (e.g. educational activities) mediate the effect of social origins on later status attainments.

Much of this current view of how attainments of one generation are linked to another generation originated with Blau and Duncan's American Occupational Structure, published in 1967. In this work, the authors focused on the degree to which socioeconomic achievements were dependent upon a person's family of origin and how much they were interpreted by the individual's own experiences and achievements. To study the inter-relationships among these factors, Blau and Duncan formulated a model of the socioeconomic life cycle, in which the causal ordering of the variables was explicitly specified and the effects of various factors were estimated by path analytic techniques.

With respect to the role played by education in determining attainments, Blau and Duncan found that one's social background was directly related to the amount of schooling attained. In turn, this educational attainment was shown to have important consequences for later occupational attainments. More importantly, the effect of education, after these social origin factors were taken into account, still had a significant and major impact on occupational attainments.

From the standpoint of policy issues, the Blau-Duncan findings and subsequent research (cf. Duncan, Featherman and Duncan, 1972; Sewell and Hauser, 1976) lent statistical credence to the traditional belief that education was an efficacious route to achieve social equality. In short, because education exerted an independent influence on achievement, belief in popular slogans such as "get a good education to get a good job" seemed justified.

Elaboration of the basic Blau-Duncan model followed; the most notable alteration being the incorporation of social psychological variables--educational and occupational aspirations, achievement motivation, and influence of significant others (Sewell, Haller and Portes, 1969; Sewell, Haller and Ohlendorf, 1970; Sewell and Hauser, 1972). This new model, known as the Wisconsin model has considerably enlarged our view of the mechanisms of intergenerational status attainment by incorporating motivational factors and educational experiences as intervening factors mediating the effect of parental socioeconomic origins on later socioeconomic attainments. Numerous replications of the Wisconsin model have occurred (e.g. Duncan, Featherman and Duncan, 1972; Sewell and Hauser, 1972; Sewell, Haller and Ohlendorf, 1970; Sewell, Haller and Portes, 1969; Kerckhoff, 1974; Alexander, Eckland and Griffin, 1975; Debord, Griffin and Clark, 1976); nothing in these replications has denied the education-work association or that educational attainment itself, net of social origins, has an appreciable effect on occupational outcomes. For example, Alexander et al. in a replication using the Explorations in Equal Opportunity (EEO) data, find that "of the total educational-occupational status correlation in the EEO data ($r = .610$), 74% ($b = .452$) indexes the direct, nonspurious effect of educational attainment on occupational status attainment" (Alexander et al., 1975, p. 337).

Despite some recently discussed inadequacies of the Wisconsin model, notably its reduced power in explaining attainments for blacks (Debord, et al., 1976; Porter, 1974; Hout and Morgan, 1975; Gordon, 1972), the basic view of status attainment as a mediation process in which a variety of social and psychological experiences interpret the effect of status characteristics on later educational and occupational achievements has not been supplanted. Nor has the assertion of the independent importance of educational attainment for later occupational achievements been denied, although serious concerns that inadequate controls for family background measures artifically inflate this education-occupation association have been voiced (Bowles, 1972; Bowles and Gintis, 1976).

Education to Work and Work to Education

The status attainment literature has been characterized as possessing a degree of cumulativeness unusual in sociological inquiry (Alexander, et al., 1975); yet many important issues remain which should be addressed before confidently concluding that such models are valid in the small as well as the large sense. For the present purpose, we will discuss only one aspect of these models--the linkages between education and work.

From the perspective of the present project we are not so much interested in the "front end" of the model which determines educational attainments, but in the "outcome end" where educational attainment is seen to affect occupational position and earnings. The assumption implicit in these models is that education is completed prior to labor force participation. In the Blau-Duncan data (OCG data) the men were asked to specify "the first full-time job you had after you left school." Approximately one-eighth of the respondents gave an answer which was unlikely unless, according to Blau and Duncan, they (a) erroneously reported part-time job or school vacation job as first job, or (b) they interrupted their schooling to enter the labor force and later resumed their schooling. Blau and Duncan note that these "inconsistent" cases include men who gave 19 as their age of first job, but were indeed college graduates; or who gave their age as 14, 15 or 16 at first job, but had educational attainment equalling high school (Blau and Duncan, 1967, pp. 167-168).

In discussing this discrepancy between age at first job and date of last leaving education, Duncan, Featherman and Duncan (1972) analyzed the characteristics of those men in the OCG data with consistent and inconsistent patterns (consistent meaning that age at first job and leaving education were comparable). They found that (1) for a given educational attainment level, substantial differences in ages for first full-time work experience occurred; (2) for those who obtain more education after labor force entry, this educational increment resulted in "atypically rapid promotion within the occupation structure" (Duncan et al., 1972; 216) and (3) the socioeconomic status of later jobs of these inconsistent men seemed to vary independently of their earlier jobs, suggesting discontinuity in career patterns for those who did return to school. But, Duncan et al. caution that their results are of necessity speculative because they were uncertain about the legitimacy of the assumption that the age inconsistencies come about due to interrupted schooling and not errors in reporting.

In the OCG-II survey, fielded in 1973, the wording of the education question was changed, apparently to avoid this ambiguity. Each respondent was asked:

"Describe the first full-time civilian job you had after you completed your highest grade in school" and also asked to provide the date "you actually began this job, even if you started the job before you completed your highest grade in school," (Hogan, 1978, p. 575). According to Hogan, the percentage of men beginning work prior to schooling completion is approximately the same in the OCG-I and OCG-II surveys, presumably about one-eighth of the sample.

However, these figures only pertain to those men who return to school and change a grade level in educational attainment. So, for example, persons who went to college for only a semester would not have this educational attainment counted because it did not result in a different earned grade. In addition, asking for the grade level is inappropriate for indicating change in attainment for other reasons. Credentials, such as a certificate for completion of a welding or electrical or TV repair course may be occupationally valuable. Yet these types of courses do not fit under the general academic typology of years of schooling completed.

If one uses this broader view of schooling experiences as Ornstein (1976) did, the frequency of occurrence of interruption is much higher. For white men, in the labor market for at least 17 months, with a high school degree, 34 percent returned to school within a period of 8 years. Overall educational stopping points, Ornstein found that 26.8 percent of the white men (aged 30-39 in 1968) and 11.6 percent of the black men went back to school within 8 years after entry into the labor market. Also, one may well find differences in discontinuity patterns depending upon the year of entry into the labor market.

Other evidence that interruptions in education occur frequently is Eckland's (1964) study of college students who dropped out and eventually returned. He documents that the normal time to complete a college degree was more than four years and that many students followed irregular patterns in completing their degree.

In brief, the evidence for the prevalence of interruptions in education is based on several differing definitions of an interruption and a resumption and on samples covering differing birth years. Not surprisingly, the figures based on the more restrictive definitions (change in grade level, full-time education) evidence lower prevalence figures than do figures which include part-time, non-academic, non-grade level incidents of educational activity.

The only study, besides ones conducted by the author of this report, to directly address the antecedents and consequences of interruption to schooling is "Discontinuities in Schooling and the Socioeconomic Life Cycle" by David Featherman and T. Michael Carter (1976). The basic thesis of this study is that the timing of events in the life course can be as important as the occurrence of the event itself. And, because of the cohort structure of schooling and labor force entry transitions, Featherman and Carter propose that discontinuities in schooling, which put an individual out of phase with his cohort, will have deleterious occupational consequences. Their examination, then of the causes and effects of differently timed educational events, can be viewed as a piece of the larger issue of normative schedules for events in the life course (see Elder, 1975 for an excellent theoretical statement of this problem and Hogan, 1978 for an empirical examination of the timing of events, particularly marriage and labor force entry.) Basically, this view of the life course suggests that there are "appropriate," i.e. normative schedules of events, in the transition from youth to adulthood. In the normative ordering, one first completes schooling, then enters the labo[illegible] market, then is married and has children. Deviation from this ordering is suggested to have undesirable consequences, such as higher divorce rates for those inverting the marriage-labor market order (Hogan, 1978).

Featherman and Carter similarly view discontinuities in schooling as having potentially negative consequences for occupational attainments, primarily because of the competitive disadvantage of the men when they do return to school and eventually enter the labor force, at a later age than other members of their birth cohort.

To examine the antecedents and consequences of interrupted schooling, they utilized panel data from 17-year-olds in all high schools in Lenawee County, Michigan. They describe three types of discontinuities:

1. age-grade retardation (age 17 and in grades 8-10) (9.4 percent of sample).
2. six-month lapse or more between high school exit and postsecondary entry (20.2 percent).
3. six-month or more interruption during past high school education (22.3 percent).

Using a model of status attainment which incorporates dummy variables for these interruption/delay patterns, they found:

1. Socioeconomic factors (as indexed by father's occupation, father's education and mother's education) and other background and schooling factors (rural and farm upbringing, number of siblings, ability and grade point average) do not significantly predict the discontinuity. Whatever causes discontinuities is not tapped in this model.
2. Educational discontinuities, especially the delay in starting post high school training, appear to handicap those who experience them by resulting in about one year less of formal training relative to those not experiencing a delay. Discontinuities do not directly affect status of first job, however.
3. Schooling discontinuities and age grade retardation have negative influences on income, although not statistically significant by the author's standards.

According to Featherman and Carter, "discontinuities in schooling handicap a man who experiences them because the socioeconomic life cycle in the United States is organized to process cohorts; the school, the economy, and society gain a certain operational efficiency from the relatively homogeneous experiences within the cohort" ...Every culture.. organizes its institutions of socialization according to its conception of the life cycle. In our own industrial society, there are sociologically rational connections between schools and the labor market; it would be surprising not to observe socioeconomic costs imposed on those who violate implicit age-specific behavioral norms which underlie the structure of education and which govern the transition from school to work." (p. 158)

If, in fact, the findings of Featherman and Carter apply in general, it is of some policy and educational significance. The present system of delivering education appears, at least impressionistically to offer greater options for discontinuities, for interruptions and for time-out. As Beverly Duncan phrased this situation some ten years ago, "Evidence is accumulating that the transition from student to worker is not an irreversible change in status which can be dated with precision. The transition seems rather to occur over a period of some years during which young men mix work experience with formal training, often interrupting both to fulfill a military obligation." Our current sociological view of this tendency would suggest that this combination of education and work will not have optimal results for the individual employing it. The thrust of this investigation is to examine, in detail, the credibility of this present sociological view.

B. Issues to be addressed in this report

1. Description of educational careers

Given the shortage of descriptive information on educational activities, one major purpose of this report is simply to document the patterns of involvement in education. We describe the educational activities and attainments and their pattern of occurrence for a nationally representative sample of men, aged 30-39 in 1968. The documentation of these sequences of activities is possible because of the availability of continuous histories of educational involvement. The sample and survey design are detailed in the next section of this report.

2. Factors associated with use of alternate patterns

In addition to describing the patterns of educational activities, this report attempts to isolate the factors associated with utilizing alternative patterns. We examine first how parental socioeconomic background is related. We note that Featherman and Carter did not incorporate a measure of family income in their analyses which we see as potentially important in explaining the propensity to discontinue or continue schooling. Consequently, in the examination of factors related to continuity of educational enrollment we will attempt to assess the extent to which family economic resources are implicated in schooling decisions.

Next, we consider the role of credential and degree status at the time of interruption as an element in continuation. We imagine that having stopped short of a degree may be a very powerful incentive to return to school later on.

Third, we consider the nature of the labor market, in particular the unemployment rate for the men at the time of their eighteenth birthday to assess, in general, the effect of labor market conditions on discontinuity.

Fourth, we examine how labor market experiences while still in school may impinge upon educational discontinuities. Holding a part-time or full-time job while still a full-time student may act as a deterrent to dropping out of school for some individuals or as a contributing factor for others. That is, the job may enable the respondent to finance his education (a positive effect) or it may serve as an alternative to continuing education (a negative effect). In this examination, we will also look at the similarity of jobs held while in school and then immediately after leaving school.

Occupational factors, such as the wish to change fields or to advance within a field, are often motivators for resuming schooling (Johnstone and Rivera, 1965). In the analyses of how occupational factors influence resumption of education, two dimensions of occupations will be compared for those continuing and those not continuing their education. Prestige scores for all jobs will be used to obtain a prestige "growth" curve for the men who never go back to school. An identical procedure will be used for men who resume schooling. A comparison of the prestige profiles for these two groups should indicate in a rough manner if the men who resume schooling are characterized by a steeper growth curve than are men who do not continue schooling. The second occupational dimension to be compared is the nature of the work environment itself, as indicated by Holland's occupational typology. The six classifications--Realistic, Investigative, Artistic, Social, Enterprising and Conventional--characterize the actual work environment of occupations. We hypothesize that men who never continue schooling, for a given education level, have more similar Holland type jobs than the men who later resume their schooling. Such a finding would be consistent with the Duncan et al. (1972) conclusion that the later occupation of men who followed "inconsistent" education-occupation patterns seemed to be independent of their first job.

We also examine the role that military service plays as a factor to interrupt or possibly help resume schooling. Being drafted could certainly serve as an interruption. However, military benefits later on could help the men continue their education.

Finally, we will consider the role of the timing of marriage and family formation and the exit from education. A family may serve as an economic benefactor (e.g. spouses and stipends) or alternatively a family may serve as an economic encumbrance. We will examine both the income adequacy of the family and the household composition in an attempt to gain insights into this subject.

Household composition, by detailing who (e.g. wife, grandmother, daughter, son, father-in-law) lived together indicates the presence of potential dependents, as well as the presence of other potential bread winners. Work histories pertaining to the wives of the men in the sample which are available may indicate if the presence of a working wife facilitates the resumption of schooling.

3. Occupational Effects of Continuing Education

Why are educational and occupational attainments so highly correlated? The debate drawn around this issue concerns the credibility of two competing hypotheses: (1) education is valuable because it indicates the presence of various desirable competencies and (2) education is associated with occupational success because employers use education as a screening device.

The present research informs this debate over the relative importance of the "competencies" and the "screening" function of education in two ways.

a. The finding that educational attainment is less strongly linked to later occupational attainments than earlier ones (Blau and

Duncan, 1967) is interpreted as support for the screening argument (see Jencks, 1972). Yet, as noted frequently in this proposal, investigators of the role of education have relied upon education measured at one point in time, i.e. prior to labor force entry. If educational changes accompany occupational changes, the lower correlation between education and subsequent job status may be due in part to the erroneous measurement of the education variable. A concurrent measurement of education and occupation is essential before making conjectures about the efficacy of education for competencies or education for credentials.

b. Different types of continuing education may provide different occupational pay-offs. What forms of continuing education provide the largest increment in prestige or income? The pay-off rate for different types of programs (vocational vs. non-vocational or degree vs. non-degree) or for different attainment changes can supply some information relative to this debate over why education is linked to occupational success. For example, the screening hypothesis implies that graduation from a curriculum should provide more pay-off than simple enrollment without a degree attainment change, for the same amount of time spent. Do we find a larger pay-off for continuing education of the same length of time which results in degree attainment than for non-degree changes? Such a finding would support the screening hypothesis. (In this discussion, we imply that only one hypothesis can be valid; both explanations are probably pertinent, so the issue should really be phrased--how much of the education-occupation association is due to each factor?)

Technical activities: Refining retrieval system

A unique computer storage and retrieval system was designed for use with the Life History Sample (LHS) (Blum, Karweit, and Sorenson, 1969; Karweit, 1973). Documentation of the retrieval system and computer tapes has been substantially revised (see technical appendices A and B).

Summary of Objectives

The mechanism by which initial career attainments are differentially converted into later career accomplishments is poorly understood. The present investigation informs our understanding of the early career attainment process by focusing on the extent to which educational activities, undertaken after entrance into the labor market, are influenced by and contribute to occupational changes. This research indicates who discontinues and later resumes their education, indicates what types of programs and schools are used, and documents the occupational effects of such usage.

In the more general sense, this research is concerned with the role that education plays in American society. The prevalent attitude seems to view education as a screening device, limiting and opening job opportunities on the basis of credentials earned and not competencies attained. This conclusion rests heavily on previous empirical investigations which have completely ignored the fact that many Americans continue their education after going to work. We suggest, at least, that various hypotheses regarding the function of education be examined using models and data appropriate to the task, that is, models which incorporate continuing education. We therefore think that conclusions concerning the relative merits of the "screening" or "competencies" hypothesis are premature and hope that the reported research will additionally inform this debate.

C. Procedure

1. Sample Design and Selection

The Retrospective Life History data (LHS), collected in 1968 as a part of the Social Accounts project at the Johns Hopkins University, will be used in this analysis. The universe for the sample in this study was the total population of black and white males 30-39 years of age, in 1968, residing in households in the United States. Individuals were selected by multi-stage area probability methods with an oversampling of black men which resulted in a sample of 738 blacks and 851 whites. Details of the sample design may be found in Blum, Karweit and Sorenson (1969). The information, collected retrospectively from the time the respondent was aged 14 to the time of interview, included educational, occupational, familial and residential history. These four areas were measured by 13 variables: full-time education, full-time employment, part-time employment, part-time education, military service, other full-time activities, family history, wife's education, wife's employment, household composition, income adequacy, home details and migration history. A brief description of the contents of each variable is given in Table 1. Details of events in each of these areas were recorded along with a "time" dimension, in months, indicating when a change occurred in any variable. Thus, with this type of collection instrument, all changes in a respondent's familial, residential, occupational and educational history were recorded from age 14 to time of the interview. In addition, characteristics of the respondent's family of origin (at the time the respondent was aged 14) were obtained.

- - - - - - - - - - -

Table 1 About Here

- - - - - - - - - - -

2. Survey Instrument

Figure 1 is a sample survey instrument used in the LHS. Respondents were asked to report events in their familial, residential, educational and occupational history from age 14 until the time of the interview. To insure accuracy in matching age and calendar year, self-adhesive "age strips" were attached to the interview sheet once the interviewer had determined the year in which the respondent was aged 14. The respondent then could recall events either by his age or by the calendar time.

- - - - - - - - - - -

Figure 1 About Here

- - - - - - - - - - -

3. Computer Storage and Retrieval System

A data storage technique was devised which stored information for each respondent in variable length lists, thus minimizing the space required to actually store the voluminous data contained in these histories. With this technique, a particular variable is physically located in different positions for each person, necessitating the construction of a locator index and a retrieval system for accessing the file. This system permits access to the data so that either information about individual respondents or transitions of a variable may be retrieved as the unit of analysis. When transitions are the unit requested, adjacent states (e.g., job one and job two) are retrieved. The retrieval program permits access to the data in terms of a particular time (age or calendar

Table 1

Summary of information collected in life history survey

A. Time-Dependent Data, Age 14 to Present

Variable Name	Details	Comments and Definitions
1. Full-time education	Name and/or type of school Degree/highest grade completed	If respondent received "public support" for education (e.g., G.I. Bill of Rights), that information is recorded under No. 11.
2. Full-time employment/ unemployment	For each period of employment, the following is recorded: (a) occupation (b) industry (c) starting and ending wages (d) wages in kind (if applicable) (e) hours/week (f) reason for termination: own decision not own decision (g) at termination: had new job knew of job neither (h) got job through: friends public agency private agency advertisement other (i) formal on-the-job-training (j) union membership	Full-time employment is defined as employment which requires at least 35 hrs/week.

Table 1 (cont.)

3. Part-time employment	Same as (a)-(e) of No. 2 above.	Part-time employment is defined as employment which requires less than 35 hrs/wk.
4. Part-time education	Name and type/purpose of school; Diploma/certificate or course	Formal schooling in which respondent engaged on a basis that was less than the standard "full-time student."
5. Military service	Drafted or enlisted Location of longest stay while on active duty Place of discharge Ranks at entry and discharge Military education	Military education is education the respondent received in the military which is equivalent to civilian education. Excludes training received for military occupations.
6. Other full-time activities	Activities not included in other "full-time" variables	E.g. major illnesses, travel, prison, etc.
7. Family history	Marital status Age of wife at marriage Births, deaths, and adoptions of children	Common Law marriages are included as "marriage."
8. Wife's education	Degree or highest grade completed at time of marriage Education subsequent to marriage	For wife's education subsequent to marriage, only the completion date recorded.
9. Wife's employment	Same as items (a)-(e) of No. 2 above	Wife's employment recorded only during marriage to respondent.

Table 1 (cont.)

10. Household composition	Relationships to respondent of all individuals with whom he was living	
11. Income adequacy	R's perception of whether or not the household of which he was a member was: able to save live comfortably without saving just manage need outside help	If R reports that the household needed outside support, the source (if public) was recorded.
12. Home details	Type of housing No. of rooms Rent/own/share Neighborhood	For each housing unit, we inquired as to whether the immediate area was all white; mostly white; half white- half non-white; mostly non-white; or all non-white.
13. Migration history	City/town County State	If foreign, name of country only. For each rural location, we record whether location is farm or non-farm.
B. Cross-sectional data		
15. Siblings		
16. Father's education Mother's education		If no father and/or no mother at age 14, education of father substitute recorded and the relationship to respondent of the substitute is specified.

Table 1 (cont.)

17. Father's occupation and industry Mother's occupation and industry		Same instructions for "substitute" apply here as in the case of parental education
18. Family happiness at age 14		
19. Nationality	"What is the main nationality in your mother's background?" "What is the main nationality in your father's background?"	Asked of whites only.
20. Religion	a) Religion of family of origin b) Present religion	If a) and b) are different--year of change is recorded
21-22. Voting behavior	a) Last presidential election b) Year of first vote	
23. Open-ended item dealing with major changes in Respondent's life		After respondent completes reply, direct probes deal with Family life Job/career Education Military service Major moves if respondent has not mentioned these life areas previously.
24. Short-form verbal achievement test		Adopted from Miner
25. Social security number		Requests number and permission for access to Social Security file.

time) or at the time of the occurrence of specific events. For example, it is possible to retrieve the occupational prestige for all men in the sample at age 30, or in 1965, or at the date of their first marriage. Additionally, the retrieval program can accumulate the duration of a particular state (e.g. length of employment) between two times or events (e.g., between age 18 and date of marriage). A complete description of the original computer storage and retrieval system is available elsewhere (Blum et al, 1969; Karweit, 1973).

4. Variables Collected in the LHS

Table 1 contains a summary of the variables collected in the life history survey. Details of the coding scheme for variables to be used in this research are given below:

a. Family background

(1) Father's Education:

0 = less than 4 years
1 = 4-7 years
2 = elementary school graduate
3 = some high school
4 = high school graduate
5 = high school graduate + vocational
6 = some college (up to 3 years)
7 = college graduate
8 = advanced degree or advanced degree candidate

(2) Mother's Education

See coding above

(3) Father's Prestige:

NORC prestige scale

(4) Siblings:

Number of brothers and sisters excluding respondent

(5) Income Adequacy:

Subjective perception of adequacy of income as either

(a) save
(b) comfort, no save
(c) manage
(d) need outside help

b. Ability

Number of correct responses on a 10-item verbal ability test which asked for definitions of:

(1) space
(2) broaden
(3) caprice
(4) edible
(5) animosity
(6) pact
(7) cloistered
(8) emanate
(9) accustom
(10) allusion

c. Respondent's Educational Attainment

See coding under father's education

d. Respondent's Occupational Prestige

NORC prestige scale

e. Income

All jobs, both full-time and part-time, were reported by the respondents, as well as all jobs held by their wives after the marriage date. They gave the beginning and ending wages for each job and for each promotion received while working at a particular job. Respondents reported wages, where remembered, for themselves and their wives, in various units, such as $100 a week, $450 a month, or $6000 a year. After this information was put on a master tape, all reported wages were converted to monthly units; i.e., \$100/week was multiplied by 4.3. to yield \$430/month, and \$6000 was divided by 12 to yield \$500/month.

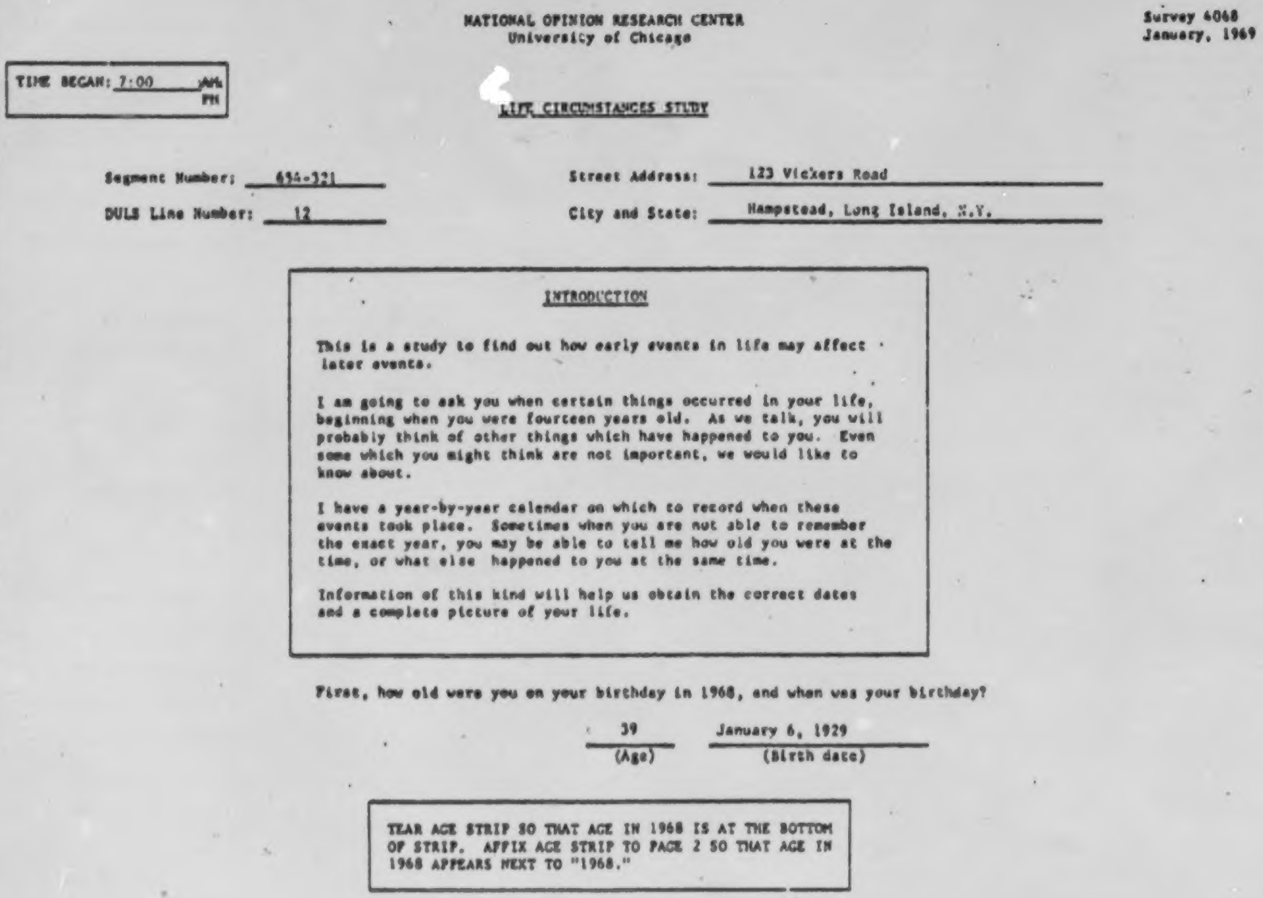
Next, these monthly wages were "price-adjusted" so that they were expressed in terms of January, 1969 dollars; that is, dollars earned before 1959 were inflated using a different coefficient for each year, and those earned after 1959 were deflated in the same manner. For example, the coefficient for 1944 is .613, and if a respondent who started a job during that year reported starting wages of \$425/month, the price-adjusted version of that income is \$425/.613 = \$693.31.

f. Continuing Education

Data pertaining to all part-time education entries and military education are provided. For degree-oriented programs, educational attainment is coded as detailed under father's education. The type of school is indicated as:

1 = elementary
2 = junior high school
3 = high school, public
4 = high school, private
5 = post high school vocational or technical training
6 = junior college
7 = four-year college
8 = professional school (law)
9 = professional school (medicine)
10 = professional school (business administration)
11 = professional school (other)
12 = graduate school

Figure 1



NATIONAL OPINION RESEARCH CENTER
University of Chicago

Survey 4068
January, 1969

TIME BEGAN: 7:00 ~~AM~~
PM

LIFE CIRCUMSTANCES STUDY

Segment Number: 634-321

DULS Line Number: 12

Street Address: 123 Vickers Road

City and State: Hampstead, Long Island, N.Y.

INTRODUCTION

This is a study to find out how early events in life may affect later events.

I am going to ask you when certain things occurred in your life, beginning when you were fourteen years old. As we talk, you will probably think of other things which have happened to you. Even some which you might think are not important, we would like to know about.

I have a year-by-year calendar on which to record when these events took place. Sometimes when you are not able to remember the exact year, you may be able to tell me how old you were at the time, or what else happened to you at the same time.

Information of this kind will help us obtain the correct dates and a complete picture of your life.

First, how old were you on your birthday in 1968, and when was your birthday?

39 (Age)

January 6, 1929 (Birth date)

TEAR AGE STRIP SO THAT AGE IN 1968 IS AT THE BOTTOM OF STRIP. AFFIX AGE STRIP TO PAGE 2 SO THAT AGE IN 1968 APPEARS NEXT TO "1968."

Figure 1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

Year	Age	1. FULL TIME EDUCATION (a) Month	(b) Name and/or type of school	(c) Degree/ highest gr.comp.	2. FULL TIME EMPLOYMENT OR UNEMPLOYMENT (Ask 11-a "Support," for unempl.) (a) Month	(b) Occupation	(c) Industry	Wages (d) In $ Beg. Amt.	End'g Amt.	(e) In kind F=food H=hous'g	(f) Hrs/ wk	(g) Left Job: O=own decision N=not own decision	(h) At termination: H=had new job K=knew of job N=neither	(i) Got Job thru: Fr=Friends Fa=Family Pu=Pub.ag. Pr=Priv.ag. A=Ads O=Other	(j) On-the-Job Training (incl. apprentice trng.) How long? Never! ☐
1943	14		Barker Elem.												
1944	15	June Sept	Barker Cons. HS	8 9											
1945	16	June Sept	St. Louis Public HS	10											
1946	17	Sept	↓ Oct	10	Nov	Unemployed (see note p. 3)									
					Dec	Attendant ↓	Gas Station ↓	.75 hr			40			A	
									.75hr			N	N		
1947	18				Apr-July	Stock Clerk	Dept. Store	.80 hr	.80		40	N	N	Pu	
						Army (see 5.)									
1948	19														
1949	20														
1950	21														
1951	22				Feb	Driver	City Bus Co.	1.10 hr			40			A	Driver Training 3 weeks
1952	23														
1953	24	Sept	City College of New York		Aug	↓	↓		1.30 hr		40	O	N (see note)		
1954	25														
1955	26	June	↓	BA (business)	June	Salesman	Levin Bros. Soap Mfg.	$6,000 yr			42			O	Management Training Program - 6 weeks
1956	27														
1957	28					↓	↓		$7,500 yr		40	O	H		
1958	29				Aug	Area Supervisor	O. Sedar Brush Co.	$8,250 yr			40-4			O	
1959	30														
1960	31														
1961	32														
1962	33														
1963	34														
1964	35				Feb	↓			$11,000 yr		40-45	N	N		
												leave of absence for illness			
1965	36				March	Office Manager		$12,000 yr			45-50			back to same job	
1966	37														
1967	38														
1968	39					↓	↓								
Current						Office Manager	O. Sedar Brush Co.	$13,000 yr			45-50				

Figure 1

Figure 1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.   USE 2-A ONLY IF R HAD MORE THAN TWO JOBS IN GIVEN YEAR & ALWAYS GO BACK TO P.2 FOR NEXT YEAR.

(k) Name of Union Never? ☒	2-A FULL TIME EMPLOYMENT OR UNEMPLOYMENT: (Ask 11-a "Support," (or unempl.) (a) Month	(b) Occupation	(c) Industry	Wages (d) In $ Beg. Amt.	End'g Amt.	(e) In kind F=food H=hous'g	(f) Hrs/wk	(g) Left Job: O=own decision N=not own decision	(h) At termination: H=had new job K=knew of job N=neither	(i) Got Job thru: Fr=Friends Fa=Family Pu=Pub.ag. Pr=Priv.ag. A=Adv O=Other	(j) On-the-Job Training (incl. apprentice trng.) How long? Never? ☐	(k) Name of Union Never? ☐	Year
		(walking cart)		(got commission)									
	Jul-Sept	Ice Cream Seller	Dairy-Ice Co.	$50 wk	$60 wk		50 est	O	K	Fr			1947
	Sept-Dec	Laborer	Hiway Const. Co.	$1 hr	$1 hr		40	N	N	Pu			1947

NOTES

Nov. 1946 R looked for work without success after quitting school. He dropped out after repeating 10th grade for a month.

Aug. 1953 R stopped working full-time for Bus Co. in order to give full time to his studies, but cont'd to drive bus on a part-time basis.

Figure 1 (cont.)

USE THIS PAGE FOR EXTRA NOTATIONS BUT ALWAYS INDICATE YEAR AND COLUMN TO WHICH NOTE APPLIES.

Year	
1943	Col. 12 - R not sure if actual rent was paid or part of sharecropper arrangement
1944	
1945	
1946	
1947	
1948	
1949	
1950	
1951	Col. 4 - R was half-time student for a few years, worked toward B.A.
1952	
1953	
1954	
1955	
1956	
1957	
1958	
1959	
1960	
1961	
1962	
1963	
1964	
1965	
1966	
1967	
1968	
Current	

Figure 1 (continued)

Figure 1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

3. PART-TIME EMPLOYMENT: Never? ☐					4. PART-TIME EDUCATION: Never? ☐				5. MILITARY SERVICE: Never? ☐			6. OTHER FULL-TIME ACTIVITIES:	
(a) Month	(b) Occupation	(c) Industry	(d) Wages	(e) Hrs/Wk	(a) Name and/or type of school	(b) Month	(c) Degree/Diploma/Certificate or Course	(d) Tuition R=Self E=Empl. O=Other	(a) Draft./Enl. [illegible]	(b) Beginning & ending rank	(c) Education Never? ☐	Major Illnesses? Travel? Etc.?	Year
													1943
													1944
													1945
													1946
									Dec.-	Priv.			1947
									drafted		G.E.D. H.S.diploma		1948
									Georgia				1949
									Dec.-Mo.	Corporal			1950
					City College of New York	Sept.	Business Major	0	Ft. Leonard Wood				1951
								0					1952
Sept. ↓	Bus Driver	City Bus Co.	$1.30 hr	30		Aug.		0					1953
													1954
Feb. Feb.-May	 Library Asst.	 Univ. Library	$1.40 hr $1.25 hr	20 25									1955
													1956
													1957
													1958
													1959
													1960
													1961
													1962
													1963
												Feb.-Tuberculosis ↓	1964
												March	1965
													1966
													1967
													1968
													Current

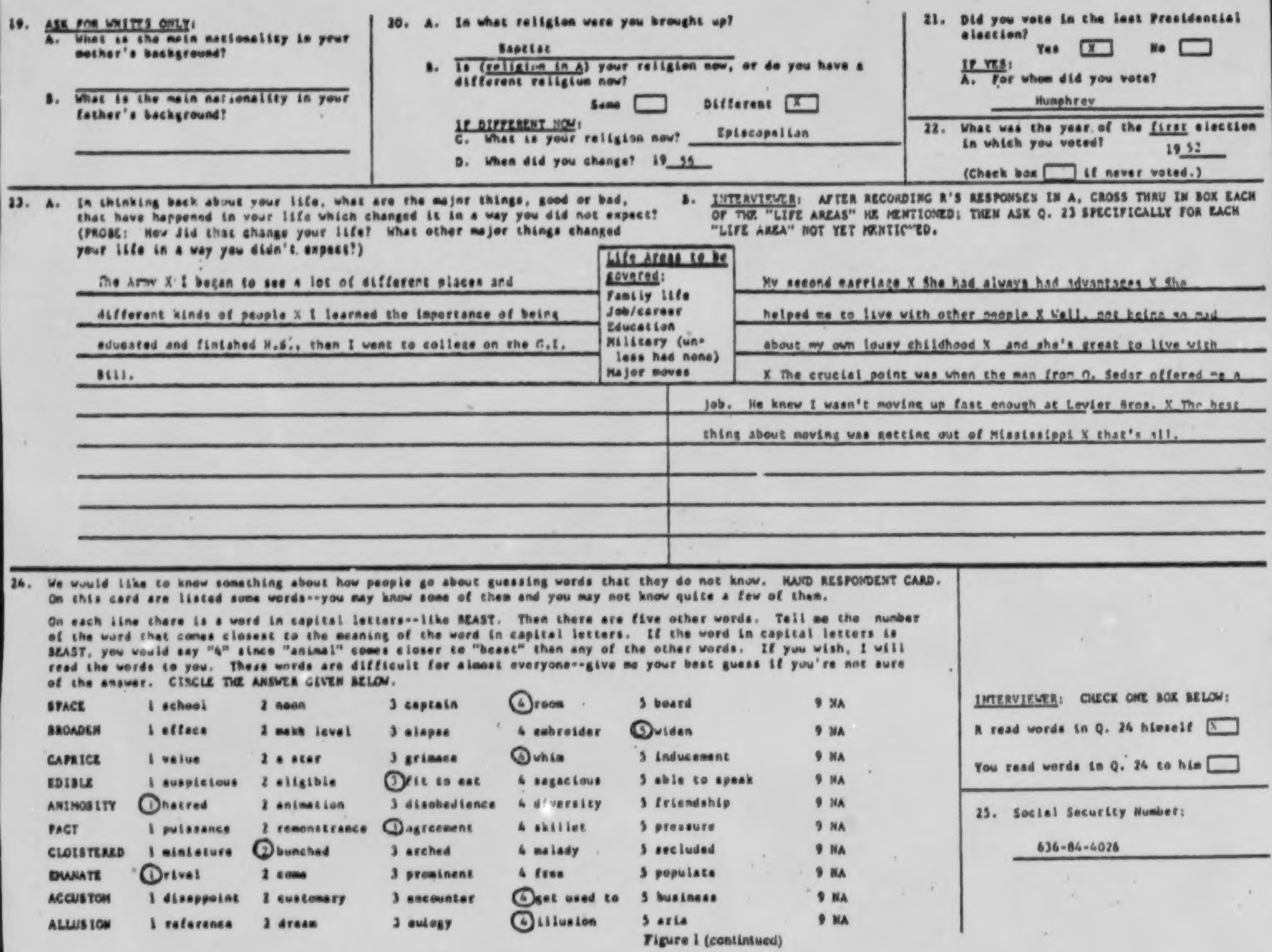
Figure 1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

Year	7. FAMILY HISTORY (a) Month & Marital Status	(b) Wife's age at marriage	(c) Children Male Female Mo. of Birth	(d) Birth control dur. mar. Never? ☐	8. WIFE'S EDUCATION: Degree or highest gr. comp. at mar. & since	9. WIFE'S EMPLOYMENT (during marriage to R.): Never? ☐ (a) Month	(b) Occupation	(c) Industry	(d) Wages	(e) Hrs/wk	10. HOUSEHOLD COMPOSITION: Relationships	11. INCOME ADEQUACY: S=Save C=Comfort, no save M=Manage D=Need outside help	(a) Public Support Share of total income A=All M=More than ½ H=About half L=Less than ½ N=None	Kind of Support
1943											Mother, Step-father, 2 Bros., Aunt	M		
1944														
1945											(June) Mother, Step-father 2 Brothers			
1946	Nov married	16		no	10th gr						(Nov) Wife and above family	D (family)		
1947			M-July								(June) Wife (July) Wife + Son (Dec) Military	M C		
1948						Jan	Cleaning Lady	Gov't Hosp.	.65 hr .80 hr	40				
1949						Dec	Sales Clerk	10¢ Store	.95 hr	40				
1950											(Dec) Wife + son	M		
1951	June divorce					June					(Jan) alone	M	L	G.I. Bill (Sept
1952														
1953														
1954											(July) Roommate		L	(June)
1955														
1956	July married	23		yes.	A.B.	July	Journalist	Daily News Paper	$5,000 yr	40	(July) Wife	C		
1957				no		Feb			$5,250 yr	40				
1958			F-May	-							Wife + daughter (May)			
1959			F-Sept	-							" + 2 daughters (Sept)			
1960				yes								S		
1961														
1962														
1963														
1964						Sept	Journalist	Daily News Paper	$7,500 yr	35	Wife, 2 daughters, Mother-in-law	C (illness)		
1965												S		
1966														
1967														
1968									$9,300					
Current	married													

Figure 1 cont.

Figure 1 (cont.)



19. ASK FOR WHITES ONLY:

A. What is the main nationality in your mother's background?

____

B. What is the main nationality in your father's background?

____

20. A. In what religion were you brought up?

Baptist

B. Is (religion in A) your religion now, or do you have a different religion now?

Same ☐ Different ☒

IF DIFFERENT NOW:

C. What is your religion now? Episcopalian

D. When did you change? 19 55

21. Did you vote in the last Presidential election?

Yes ☒ No ☐

IF YES:

A. For whom did you vote?

Humphrey

22. What was the year of the first election in which you voted? 19 52

(Check box ☐ if never voted.)

23. A. In thinking back about your life, what are the major things, good or bad, that have happened in your life which changed it in a way you did not expect? (PROBE: How did that change your life? What other major things changed your life in a way you didn't expect?)

B. INTERVIEWER: AFTER RECORDING R'S RESPONSES IN A, CROSS THRU IN BOX EACH OF THE "LIFE AREAS" HE MENTIONED; THEN ASK Q. 23 SPECIFICALLY FOR EACH "LIFE AREA" NOT YET MENTIONED.

Life Areas to be covered:
Family life
Job/career
Education
Military (unless had none)
Major moves

The Army X I began to see a lot of different places and different kinds of people X I learned the importance of being educated and finished H.S., then I went to college on the G.I. Bill.

My second marriage X She had always had advantages X She helped me to live with other people X Well, not being so mad about my own lousy childhood X and she's great to live with X The crucial point was when the man from O. Sedar offered me a job. He knew I wasn't moving up fast enough at Levier Bros. X The best thing about moving was getting out of Mississippi X that's all.

24. We would like to know something about how people go about guessing words that they do not know. HAND RESPONDENT CARD. On this card are listed some words--you may know some of them and you may not know quite a few of them.

On each line there is a word in capital letters--like BEAST. Then there are five other words. Tell me the number of the word that comes closest to the meaning of the word in capital letters. If the word in capital letters is BEAST, you would say "4" since "animal" comes closer to "beast" than any of the other words. If you wish, I will read the words to you. These words are difficult for almost everyone--give me your best guess if you're not sure of the answer. CIRCLE THE ANSWER GIVEN BELOW.

SPACE	1 school	2 noon	3 captain	[✓ 4 room]	5 board	9 NA
BROADEN	1 efface	2 make level	3 elapse	4 embroider	[✓ 5 widen]	9 NA
CAPRICE	1 value	2 a star	3 grimace	[✓ 4 whim]	5 inducement	9 NA
EDIBLE	1 auspicious	2 eligible	[✓ 3 fit to eat]	4 sagacious	5 able to speak	9 NA
ANIMOSITY	[✓ 1 hatred]	2 animation	3 disobedience	4 diversity	5 friendship	9 NA
PACT	1 puissance	2 remonstrance	[✓ 3 agreement]	4 skillet	5 pressure	9 NA
CLOISTERED	1 miniature	[✓ 2 bunched]	3 arched	4 malady	5 secluded	9 NA
EMANATE	[✓ 1 rival]	2 come	3 prominent	4 free	5 populate	9 NA
ACCUSTOM	1 disappoint	2 customary	3 encounter	[✓ 4 get used to]	5 business	9 NA
ALLUSION	1 reference	2 dream	3 eulogy	[✓ 4 illusion]	5 aria	9 NA

INTERVIEWER: CHECK ONE BOX BELOW:

R read words in Q. 24 himself ☒

You read words in Q. 24 to him ☐

25. Social Security Number:

636-84-4026

Figure 1 (continued)

Figure 1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

12. HOME DETAILS (a) Month	(b) Type	(c) # Rooms	(d) Own/Rent/Share-no rent	(e) Neighborhood AW=all white MW=mostly white MH=about ½ & ½ MNW=mostly non-wh. ANW=all non-white	13. WHERE LIVING (a) City/Town	(b) County	(c) State	(d) RF RNF	(e) Month	Year
	House	3	R *see p.4	Rural - no neighborhood	---	Barker	Miss.	RF		1943
										1944
June	Apt.	4	R	ANW	St. Louis		Mo.		June	1945
										1946
June Dec.	Apt. Barracks	2 -	R -	ANW -	Army				Dec.	1947
										1948
										1949
Dec.	Apt.	3	R	ANW	St. Louis	Barker	Mo.		Dec.	1950
Jan. June	Apt. Apt.	1 1	R R	ANW MH	Newark New York	-	NJ NY		Jan. June	1951
										1952
										1953
										1954
										1955
July	Apt.	2	R	MH						1956
										1957
May	Apt.	4	R	MW						1958
										1959
Oct.	House	7	O	MW	Hampstead	Long Island Nassau	NY		Oct.	1960
										1961
										1962
										1963
										1964
										1965
										1966
				MH						1967
										1968
										Current

We've asked you about your life history in the preceding questions. Now we have some general questions about your background.

14. Where were you born?

Milk Junction	Barker	Mississippi
(City/Town)	(County)	(State)

IF FOREIGN BORN: In what year did you come to this country? 19 --

15. How many brothers and sisters did you or do you have, all told?

2 Brothers 0 Sisters

16. A. What was the last year of schooling that your father completed?

3rd Grade

(If Education is for father substitute, check ☒ and specify relationship:

Step-father)

B. What was the last year of schooling that your mother completed?

6th Grade

17. A. When you were 14, what kind of work did your father do?

OCCUPATION: Sharecropper (laborer)

INDUSTRY: Agriculture - cotton

(If occupation is for father substitute, check ☒ and specify relationship:

Step-father)

IF NO FATHER & NO SUB. AT R'S AGE 14, CHECK BOX ☐

B. What kind of work did your mother do, when you were 14?

OCCUPATION: Domestic

INDUSTRY: Private homes

18. Around the time you were 14, would you say your family was:
- Very happy ☐
- Somewhat happy ☐
- Somewhat unhappy ☒
- Very unhappy ☐

Figure 1 (cont.)

That's the end of the interview. Thank you very much. You have been most helpful. I'd like to record your full name, address, and telephone number in case my office wants to verify this interview.

Harold Faulkner (Name)
123 Vickers Road (Street)
Hampstead (City)
N.Y. (State)
212 123-4567 (Telephone No., include area code)

S. S. Permission Yes ☒ No ☐

Time Ended: 8:10 ~~AM~~ PM

Total length of interview: 70 minutes

IMPORTANT - FILL IN THE ITEMS BELOW IMMEDIATELY AFTER LEAVING RESPONDENT

A. On the basis of your observation, rate the respondent and his home using the 4-point scale.

RESPONDENT IN INTERVIEW SITUATION:

Friendly	1	[✓ 2]	3	4	Hostile
Specific	[✓ 1]	2	3	4	Vague
Relaxed	1	[✓ 2]	3	4	Tense
Cooperative	[✓ 1]	2	3	4	Uncooperative
Interested	1	[✓ 2]	3	4	Not interested

FURNISHINGS IN RESPONDENT'S HOME:

Excellent quality	1	[✓ 2]	3	4	Poor quality
Excellent condition	1	[✓ 2]	3	4	Poor condition

B. Neighborhood description. CHECK ONE OF THE FOLLOWING:

☐ A wealthy, or "society"-type neighborhood, top business executives, prominent lawyers and doctors, and people with inherited incomes live here.
☐ A very well-to-do white-collar neighborhood--doctors, highly paid managers, strictly a professional and executive neighborhood.
☒ A good white-collar neighborhood--not many executives or doctors live here, but there are probably no blue-collar people, either.
☐ Predominantly white-collar neighborhood, though a lot of fairly well-paid blue-collar families live here also.
☐ Predominantly a blue-collar neighborhood--though some office workers might live here also.
☐ Strictly a working-class neighborhood, probably no white-collar workers live here.
☐ A neighborhood of laborers and unemployed.
☐ Rural farming area--houses are far apart, farmers appear to be prosperous.
☐ Rural farming area--houses are far apart; farmers appear to be having hard time making ends meet.

C. Respondent's race:

White 1
Black . . . . [✓ 2]
Other (SPECIFY) . . . 3

D. CHECK BOX FOR ONE SENTENCE BELOW.

☒ Respondent's wife was present but did not participate in interview.
☐ Respondent's wife participated but only with information about herself.
☐ Respondent's wife participated with information about herself and also helped R to remember information about himself.
☐ Respondent's wife was not present.
☐ Respondent is not married.
☐ Other person(s) present (SPECIFY)

INTERVIEWER'S SIGNATURE: Dolly Clipboard

DATE OF INTERVIEW: 12-28-68

II. Patterns of Educational Activities[2]

Educational Activities: Attainment, Duration and Type of Schooling

The range of educational attainment for the sampled men at the date of interview extends from no formal schooling to attainment of a Ph.D. or professional degree. Table 2 gives the percentage of black and white men attaining various educational levels. In terms of average attainment levels, white men have completed their high school diploma and have had some post-secondary education, whereas the average black respondent has an attainment somewhat short of a high school degree. These attainment figures appear to match fairly closely comparable Census data (cf. 1970 Statistical Abstracts, Tables 157 and 160), and indicate that not only do blacks have lower attainment levels, but that they are also less likely than whites to actually complete a credential.

Table 2 About Here

Because educational attainment has increased markedly during the last decades, it is important to examine the attainment level of the men in the sample by birth year. Table 3 provides the average educational attainment level of the black and white men by their year of birth.

Table 3 About Here

From Table 4, which gives the participation in various educational activities by age and by race, it is apparent that black men discontinue their

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[2] This section has been adapted from a paper presented at the 1978 American Sociological Association Meetings, San Francisco, California.

Table 2

Life History Survey

Highest Educational Attainment for Black and White Males

Code	Educational Level	White	Black
0	Less than 4 years of schooling	10 (1.2%)	32 (4.4%)
1	Elementary, 4-7	35 (4.2%)	92 (12.6%)
2	Grade school diploma	70 (8.5%)	52 (7.1%)
3	Some high school	119 (14.5%)	227 (31.0%)
4	High school graduate	229 (27.8%)	162 (22.1%)
5	Post high school & vocational	117 (14.2%)	68 (9.3%)
6	Some college	93 (11.3%)	56 (7.6%)
7	College graduate	108 (13.1%)	40 (5.5%)
8	Advanced education	42 (5.1%)	3 (0.4%)
	TOTAL,	823	732
	AVERAGE	4.52	3.42

Table 3: Highest Educational Attainment by Year of Birth for Black and White Men

Year of Birth	Age in 1968	White			Black		
		Mean	S.D.	N	Mean	S.D.	N
1929	39	4.68	1.99	91	3.22	1.94	61
1930	38	4.43	2.08	84	3.13	1.95	77
1931	37	4.56	1.79	89	3.19	1.99	69
1932	36	4.53	2.21	88	3.57	1.88	70
1933	35	4.86	2.00	87	3.53	1.86	73
1934	34	4.22	2.09	99	3.41	1.68	90
1935	33	4.89	1.92	71	3.58	1.88	65
1936	32	4.45	1.73	89	3.58	1.60	88
1937	31	4.81	1.75	81	3.65	1.51	75
1938	30	4.44	1.63	72	3.66	1.55	70
(scale of 0-8)				851			738

full-time education earlier than whites and that they are less likely to become re-involved via part-time education. For example, at age seventeen 62.7 percent of the white men were still in full-time education, but only 47.9 percent of the black men were. Table 4 also indicates that most blacks and whites complete their involvement in full-time education as young men and that virtually no one remains in full-time education at age 30. Involvement in part-time education is not undertaken by a majority of the men at any age; however, a substantial proportion of men in their early twenties are enrolled in some part-time educational activity.

Table 4 About Here

Because any individual may have enrolled in a part-time course more than once; these percentages do not indicate how many men ever participated in part-time education. Considering all usages of part-time education, 45.5 percent of the white men and 32.3 percent of the black men had at least one instance of participation in part-time education. Interestingly, about twice as many men are enrolled in part-time non-degree oriented courses as are enrolled in degree oriented courses. For the black sample, 23.4 percent and 9.4 percent were in non-degree and degree programs, respectively. The corresponding figures for white men were 32.9 and 15.9 percent.

Table 5 presents the average duration (in months) of participation of black and white men in each type of educational activity from age 14 to 30. Several interesting racial differences are revealed by Table 5. First, black men have been out of school for about a year and a half longer than white men by age 30. This difference reflects both an earlier dropping-out age and a lower rate of resuming educational activities. Second, black men appear to be less efficient than white men in converting time spent in

Table 4

Proportion of Respondents in Full-Time and Part-Time Schooling by Age and Race

Age	Full-Time Education		Part-Time Education (Civilian & Military)		Part-Time Military	
	White	Black	White	Black	White	Black
14	91.8	89.8				
15	86.8	81.5	0.2	0.2		
16	77.2	65.5	1.1	0.5		
17	62.7	47.9	1.7	1.0		
18	33.0	28.4	5.6	2.7	4.1	1.7
19	21.3	15.8	9.2	6.3	6.5	4.5
20	15.3	8.9	12.1	7.3	9.0	5.2
21	13.0	6.1	12.2	5.9	9.5	5.0
22	10.3	3.2	11.0	6.3	8.0	4.2
23	9.4	2.7	9.6	4.8	6.1	2.8
24	8.9	2.5	8.4	5.4	3.0	1.8
25	6.8	1.9	7.3	4.1	1.3	1.5
26	5.5	1.9	8.6	3.7	0.9	0.4
27	4.4	1.4	7.0	2.7		
28	3.1	1.4	5.6	3.0		
29	2.1	1.2	5.8	2.2		
30	1.2	0.9	5.8	2.4		

pursuit of a degree into a degree earned. On the average, counting part-time as a half of full-time,* black men spend about 11.8 years in full-time schooling or in other degree oriented programs. White men spend about 13.7 years in these same educational pursuits. Converting attainment levels to years of schooling by using the midpoint of each category and dividing this "years of schooling completed" by "years spent in schooling," black men attain .87 "years" for each year spent whereas whites attain .90 "years" for each year spent in degree oriented programs.

Table 5 About Here

This lower conversion rate for blacks may be seen more directly by the comparisons of educational attainment at labor force entry and final attainment for blacks and whites, supplied in Table 6. From this table, it is apparent that black men at all educational levels are less likely than whites to change their attainment after entering the labor market. For example, of the 179 white men who entered the labor market without a high school diploma but with some high school education, 36 percent did return to school and at least complete their high school degree. For black males, only 14.3 percent returned and completed their degree. Fewer blacks than whites resume their education once it is interrupted and of those who do resume, fewer blacks than whites convert this resumption into degree attainment.

Table 6 About Here

Interruptions, Resumptions and Labor Force Participation

In addition to describing the attainment levels and the use and duration of use of various educational activities, it is interesting to describe the sequencing, especially with respect to labor force entry, of these educational activities. I begin by differentiating the patterns of educational

Table 5

Average Number of Months in Educational Activities, Age 14-30 by Race

	Blacks			Whites		
	$\bar{X}$	σ	n	$\bar{X}$	σ	n
Out of Education	146.08	35.64	(728)	128.91	40.05	(847)
Full-Time	124.89	34.11	(732)	134.03	33.11	(848)
Part-Time Degree	17.97	21.36	(47)	23.06	23.46	(107)
Military, non-d	39.24	8.62	(29)	38.53	13.80	(62)
Part-Time, non-d	14.59	14.93	(121)	16.82	18.67	(217)
Military degree	36.78	10.77	(37)	34.36	2.63	(80)

Table 6

Final Educational Attainment by Educational Attainment at Entry Into the Labor Force (ELF) and Race

	Education at ELF	% Making some change	No H.S.	Some H.S.	H.S. Grad.	H.S. Grad. & some Voc'l.	Some College	College Grad.	Number of Cases
WHITES	No H.S.	13.0	86.4 (114)	6.1 (8)	4.5 (6)	1.5 (2)	.8 (1)	.8 (1)	132
	Some H.S.	36.0	--	64.2 (115)	20.7 (37)	6.1 (11)	6.1 (11)	2.8 (5)	179
	H.S. Grad. & Voc.	49.6	--	--	50.4 (184)	28.5 (104)	9.0 (33)	12.1 (44)	365
	Some College	42.1	--	--	--	--	57.8 (48)	42.1 (35)	83
	College Grad.	0.0	--	--	--	--	--	100.0 (91)	91
			114	124	227	117	93	176	850
BLACKS	No H.S.	4.9	95.1 (175)	3.3 (6)	0.5 (1)	0.0 (0)	.5 (1)	.5 (1)	184
	Some H.S.	14.3	--	85.3 (222)	10.3 (27)	2.6 (7)	.7 (2)	.7 (2)	260
	H.S. Grad & Voc.	39.4	--	--	60.6 (134)	27.6 (61)	5.9 (13)	5.9 (13)	221
	Some College	10.3	--	--	--	--	89.5 (43)	10.3 (5)	48
	College Grad.	0.0	--	--	--	--	--	100.0 (25)	25 (738)
			175	228	162	68	59	46	

involvement for the men in the LHS. An "interrupted schooling" pattern is defined as a lapse of six or more months between enrollment in some form of education or as a progression, without a lapse, from full-time to part-time degree education. In Table 7, the percentages of black and white men who were always in full-time education and who had some form of educational discontinuity are displayed. Again, racial differences in the pattern of educational activities are apparent. Black men are much more likely to have always been enrolled in full-time studies than are whites (59.5 percent vs. 41.5 percent). Of the men who do interrupt and later resume their schooling, white men are more likely than black men to resume schooling full-time; however, the predominant resumption pattern for both races is pursuit of education part-time.

Table 7 About Here

In addition to the racial differences in use of various patterns, it is likely that the proportion using each pattern will not be the same across all birth years. In particular, the labor market conditions and requirements for service in the military may vary quite a bit from year to year and may be factors which influence how the men go through school. In table 8 we have displayed the percentage of black and white men who go

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Table 8 About Here
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through continuously, who interrupt their full time schooling and who participate in part-time schooling. Apparently, some birth years do exhibit a much greater likelihood of interruption or participation in part-time education. Whether these variations are due, however, to interpretable factors or not will be examined in a subsequent section.

Table 7

Educational Activity Pattern by Race

First Educational Interruption

	BLACK MEN			WHITE MEN		
	Percent of Total N = 738	n	Percent of Alternate Pattern n = 298	Percent of Total N = 851	n	Percent of Alternate Pattern n = 498
Always full time	59.5%	(439)	--	41.5%	(353)	--
Interrupted full time	6.9%	(51)	17.1	13.4%	(114)	22.9%
Interrupted part time	26.0%	(192)	64.4	32.7%	(278)	55.8%
Full time to part time, no interruption	7.5%	(55)	27.7	12.5%	(106)	21.3%

An interruption is defined as a juncture of six or more months out of school.

Table 8

Percent Using Specific Patterns of Educational Activity by Year of Birth and Race

	Blacks				Whites			
Year	FT %	INTFT %	PT %	n	FT %	INTFT %	PT %	n
1929	56. (34)	8. (5)	36. (22)	61	35. (32)	21. (19)	44. (40)	91
1930	56. (42)	8. (6)	36. (27)	75	33. (27)	18. (15)	49. (40)	82
1931	55. (38)	4. (3)	41. (28)	69	42. (38)	13. (12)	45. (40)	90
1932	59. (42)	10. (7)	31. (22)	71	42. (37)	15. (13)	43. (38)	88
1933	60. (44)	8. (6)	32. (24)	74	34. (29)	11. (9)	56. (48)	86
1934	61. (54)	5. (4)	35. (31)	89	54. (53)	9. (9)	37. (37)	99
1935	62. (40)	9. (6)	29. (19)	65	41. (29)	18. (13)	41. (29)	71
1936	59. (52)	7. (6)	34. (30)	88	49. (44)	10. (9)	41. (37)	90
1937	57. (42)	5. (4)	38. (28)	74	44. (36)	11. (9)	44. (36)	81
1938	72. (51)	6. (4)	23. (16)	71	38. (28)	8. (6)	53. (39)	73

Table 9 provides a description of the type of educational activity undertaken after the interruption or after a change from full-time to part-time without an interruption. As pointed out in discussing Table 7, white men more often resume their education full-time, than do black men. Table 9 points out other racial differences in the resumption pattern. White men use military education more often than do blacks (26 percent vs. 20 percent) and are more likely to be in a degree oriented military course. Combining military non-degree oriented courses and other part-time non-degree oriented courses, black men are considerably more likely (54 percent) than are whites (48 percent) to take part-time, non-degree oriented courses. In a later section we examine the subject of these courses in greater detail.

Table 9 About Here

The resumption activity indicated in Tables 7 and 9 pertain to the first interruption of full-time schooling. For the majority of black and white men, this activity is their only resumption of education. However, about five percent of each sample did return to school via part-time or full-time schooling on multiple occasions.

Concerning the length of this first interruption, the white men, on the average, stay out of school 4.5 years before returning, whereas the black men stay out on the average 7.0 years before returning. Black men then, appear to discontinue education earlier, to resume it less frequently and after a longer absence and to pursue non-degree oriented courses more often than whites.

The most likely reason for interrupting schooling is entrance into the labor market. Few of the men who interrupted their education had a full-time or part-time job six months prior to the first interruption. Six

Table 9

Educational Activity After Interruption

	Black Men (N = 298)	White Men (N = 498)
Full-time	51 (17.1%)	114 (22.9%)
Part-time degree oriented	53 (17.7)	72 (14.5)
Military non-degree	26 (8.7)	55 (11.0)
Part-time non-degree	135 (45.3)	183 (36.8)
Military degree	33 (11.1)	74 (14.9)

months after interruption, however, the majority of these black and white men are employed full-time; white men are slightly more likely to be employed in the civilian labor force than are black men (57.4 percent vs. 51.0 percent). Six months after leaving school, about 26 percent of the black men are unemployed or looking for work compared with 17.5 percent of the white men.

Because the opportunities (or lack of them) for labor force participation are no doubt closely tied to decisions to terminate or continue schooling, it is interesting to document how schooling and work are combined for the men in this sample. In Table 10 the distribution of four types of educational-occupational patterns are presented, separately by race. The first category consists of those men who, at the date of attaining their highest educational degree, left full-time education, did not resume any sort of educational activity and eventually entered the labor market. This pattern is the one usually assumed by status attainment models. This form of transition from education to work is utilized by about 60 percent of the blacks, but only 42 percent of the whites. Other patterns of education-occupation linkages do occur and with sufficient frequency to warrant questioning the assumption that this first pattern can legitimately be termed a "standard pattern" of transition from education to work. Some 39.1 percent of the whites and 32.2 percent of the blacks leave full-time education at the point they enter the labor market, but return to part-time schooling later on. Additionally, some 8.4 percent of the whites and 4.6 percent of the blacks attain their highest earned degree after entry into the labor force via resumption of full-time schooling. The last educational pattern contains those instances in which highest education is obtained after first entering the labor force by a combination of full-time and part-time experiences.

Table 10 About Here

Up to this point, we have couched the discussion of different patterns in terms of black/white comparisons. This focus stems from our interest in locating specific parts of the status attainment model which work differently for blacks and whites and in understanding the mechanisms which produce such differences. Phrased differently, we find concluding that education is less efficacious for blacks than whites on the bases of the relative size of the education/occupation regression coefficient less than convincing. For this conclusion to be viable, we suggest that some direct evidence be supplied (calling the remaining unexplained variance discrimination is not direct evidence). That is, we are seeking to find ways to explain why this relationship comes about. One possibility is that the way educational attainment was achieved (full time continuously, part-time, etc.) as well as what level was achieved may be important for occupational attainments.

Because of this focus on contrasting the educational careers of black and white men, it is easy to overlook the possibility that factors common to both groups may be important in determining the pattern of educational activity. Specifically, we know from numerous studies of participation in adult education that individuals with little formal education are unlikely to utilize continuing education. That is, years of schooling already completed is the single most important predictor of this pattern of educational activity. Because racial disparities in years of schooling clearly exist, the different racial patterns noted here are likely

Table 10

Educational and Occupational Patterns by Race

	Black	White
Full-time, continuous education, entry into labor market, no part-time education resulting in upgrading	59.5% (439)	41.5% (353)
Full-time, continuous education, entry into labor market, part-time education which resulted in upgrading	32.2% (238)	39.1% (333)
Not continuous, full-time education, upgrading after entering labor force via resumption of full-time education	4.6% (34)	8.4% (72)
Full-time, continuous education, entry into labor market, mixture of part-time, resumption of full-time to earn highest credential	3.6% (27)	10.8% (137)

reflective of differences in educational attainment levels. So, someone could argue that we have displayed differences according to educational attainment and not race. Where one attributes cause of an effect, however, should be dependent upon substantive as well as statistical concerns. In this situation, we emphasize again that our primary concern is to isolate the parts of the status attainment model which appear to operate differently for blacks and whites and then to suggest likely mechanisms for producing those differences. Consequently, we emphasize the black/white differences in patterns. In the next section we will examine factors related to the use of alternate patterns.

Summary

Although educational credentials are normally thought to be earned through continuous enrollment in full-time schooling, we have found that a majority of white men and a substanial proportion of black men utilize alternate educational patterns. These patterns include alternating periods of labor force participation with educational participation and enrollment in part-time schooling while working full-time. This finding of the prevalence of alternate educational routes has implications for current methods of assessing returns to education. Typically, these assessments utilize measures of educational attainment obtained at a single point in time--prior to labor force entry. Thus, the measurement of educational attainment is prone to error for the many individuals who resume education after labor force entry.

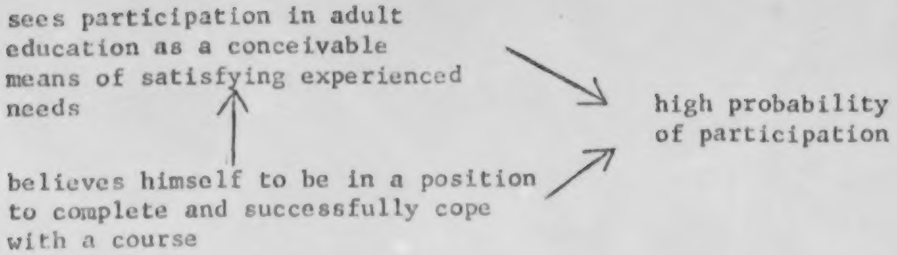
The present description of educational activities documents distinct racial differences in patterns of involvement in education. To summarize, black men were found to have lower educational attainments, to terminate their formal schooling earlier, to resume schooling less often and after a longer absence than white men. White men showed a greater tendency to utilize continuing or part-time education and had a higher likelihood of converting the time spent in educational pursuits into the attainment of a degree or credential. The consequences of these differences in educational activities by race for the estimates of returns to education are also explored in part 5 of this report.

III. Factors Related to Interruptions in Full time Schooling

A. Introduction

Very few studies have addressed the question: Why do individuals use different educational patterns? And, what are the consequences of going through school by alternate educational routes? In this section of the report, we turn our attention to the first question; some occupational effects will be examined in section 5.

What has been rather frequently addressed is the narrower question: What adults participate in adult education and for what reasons? There is a modest-sized literature related to the issues of adult participation in continuing education. In reviewing this literature, Rubenson (1977) characterizes it as primarily descriptive in nature and mainly atheoretical in presentation. In an effort to rectify the theoretical paucity of this research, Rubenson suggests some interesting constructs which might be used to synthesize the existing studies. In particular he finds the notions of expectancy, and valence to be appealing ones around which a paradigm might be organized. According to this suggested paradigm, recruitment into adult education is a function of the perceived demands placed upon a person, the perceived salience of education for meeting those demands and the existing opportunities for participation. These factors operate in a multiplicative fashion, i.e. if one is not present participation won't occur. Schematically, Rubenson presents the rudiments of this paradigm as follows:


sees participation in adult education as a conceivable means of satisfying experienced needs
believes himself to be in a position to complete and successfully cope with a course
high probability of participation

He then suggests possible personal and evnivornmental elements which may influence expectancy and valence. We find the broad outlines of this paradigm potentially fruitful for understanding the circumstances under which individuals will pursue one educational pattern vs. another. In our analyses, however, we choose not to emphasize so much, as Rubenson seems to be, the view of individuals as rational actors, making choices to maximize some subsequent position. We suspect instead that in many circumstances external events, such as becoming 18 when the Korean conflict began, or becoming ill, are significant factors in explaining the pattern followed. In other words, in the "environmental" influences which we consider, we put relatively more weight on constraints such as youth unemployment rates, and early marriages and outbreak of wars, than we will on psychological attributes, either of the individual or of his immediate reference population. Admittedly, this is less a criticism of Rubenson's point of view than it is a recognition of the type of data with which we are dealing. We simply have no direct information on the motives, ambitions or psychological orientations of the men in the sample.

Our examination of participation in continuing education differs in another significant way from previous work. We see that participation is really comprised of two separable events--an interruption and a resumption. Because these two events are counter tendencies, it is quite likely that any given factor may be related positively say to interruption but negatively to resumption. Focusing only on participation, i.e., resumption, then is only half the story. Because we do have detailed data on the timing of events, we will be able, in many cases, to determine how a certain factor is related to both parts of participation, i.e., interruption and resumption.

In the analyses to follow, we distinguish between two of the educational patterns--interrupted full time schooling and resumption of education part-time. This distinction was made because it seemed likely that distinct factors might be associated with each pattern. The presentation, in this section deals with schooling interruptions; section 4 addresses part-time education.

In keeping with our interest in understanding how educational and occupational linkages may operate differently for blacks and whites, the analyses are presented in all cases separately by race and for the races combined with race as a control variable.

The examination of various factors is accomplished by stepwise regression procedure in which variables are entered according to the "idealized" sequencing of events in the life course. That is, we first examine the role of background factors, then educational attainments, then service in the military, then labor market attachments and family formation. Although we are well aware that for many individuals, the sequence of their life events is not in this normative ordering of education, then labor market, then family, it is still perhaps the most prevalent pattern and thus used here as the basic model.

In attempting to understand factors associated with the use of alternative patterns, it is important to keep in mind the fact that a discontinuity consists of two separable and distinct events - an interruption and a resumption. Quite often we can imagine a factor to be related in opposite direction to these two elements of the discontinuity. For example, in the case of family background, we can imagine that coming from a family with high status would permit continuation of studies full time, that is it would be negatively related to interruptions. Yet, one could argue as well that once an interruption had occurred that those men from more advantaged backgrounds would be more likely to go back to school - that is, family background would positively affect resumption patterns. Because we do have data pertaining to the timing of the occurrence of many variables it will be possible in many instances to detect whether a factor is immediately associated with the interruption or resumption. (This of course is not true in the case of family background.)

B. Background Characteristics

We first examine how characteristics of ones family and ones social and ethnic background are related to use of alternate educational patterns. In the limited consideration of these factors which does exist (e.g. Featherman and Carter, 1976 and Ornstein, 1976), there is little evidence that family/social background is important in predicting who will have a discontinuous schooling pattern.*

As a starting point, we consider these factors: region of birth, race, father's education, mother's education, father's occupational prestige, number of siblings in the family, and income adequacy at age 16. We noted that previous studies have not included a measure of income adequacy of the family and to the extent that economic factors are predictive of interruption, this variable may tap that effect. Our incorporation of more direct measures of income adequacy followed also from our view that family background may be important not just because it provides the desire to participate or the view that education is valuable but because it also provides the economic resources whereby participation is feasible.

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*Some studies of adult education do report an effect of family background on continuation. However, in most cases this effect appears to be entirely mediated by the effect of educational attainment level.

Table 11 presents the results of three regression analyses (1) black men (2) white men and (3) races combined.

Table 11 About Here

We first note that background characteristics are not overwhelmingly important in predicting who interrupts their full-time schooling, as the low R^2 values attest. There are apparent racial differences in the source of the effects however. For black men, the only important predictor of interruption is father's occupational prestige with men from more advantaged homes more likely to have an interrupted/resumed pattern. We interprete the direction of the effect to indicate that once schooling has been interrupted, men from relatively more advantaged homes are more likely to resume their schooling. A similar argument applies for the effect of mother's education for the white men. It is interesting to find that southern birth is associated with a continuous schooling pattern for white men but not blacks. This result, however, is likely due to the lower educational attainment level of southern born men and their attendant lower probability of having an interruption.

In the analysis in the right hand column, it is apparent that once background factors are entered, race is not a significant predictor

Table 11

Regression of Full Time Schooling Interruption on Family and Other Background Factors for Black and White Men and for Black and White Men Combined.

	Black Men N=737		White Men N=851		Black/White Men N=1973	
	Raw	Std.	Raw	Std.	Raw	Std.
Race	--	--			-.036	-.036
Region	-.014	-.025	.060	.077*	.057	.081*
FaEd	-.001	-.009	.002	.007	-.001	-.005
MaEd	.012	.076	.021	.094*	.022	.104*
Siblings	-.002	-.035	.001	-.014	-.001	-.010
Income	-.020	-.068	.003	.007	-.015	-.040
FaOcc	.000	.091*	.001	.046	.000	.054
R^2	.029		.025		.032	

of full-time interruptions. We do not interprete this to mean that we can therefore carry out the remaining analyses with races combined as it is clear from the other coefficients reported in table 11 that there are racial differences in the process linking background factors to pattern of educational activity.

We next examined how incorporation of a measure of verbal ability might alter the interpretation of the importance of family background. We are interested in assessing the extent to which the men's academic ability mediates the effect of the family background factors. Addition of verbal ability does not greatly improve the prediction of the discontinuity (the increment to R^2 being less than two percent), although verbal ability is a significant predictor. Verbal ability seems not to diminish the already noted effects for mother's education and father's occupation, as is shown in table 12.

Table 12 About Here

The most straightforward interpretation of this effect is simply that since we have not entered educational attainment level into this analysis, the verbal ability measure is actually indexing its effect. That is, persons with higher verbal ability tend to obtain more education, thus increasing their chances of interruption by being in school longer.

However, there is another interpretation besides the misspecification argument which seems salient here. Imagine that each educational attainment level is achieved by persons of roughly comparable verbal ability and that higher attainment levels are attained by those with higher verbal ability. If, for some reason, "the appropriate" attainment level for a person of a given ability level is not achieved, we can well

Table 12

Regression of Full Time Interruption on Background Factors and Ability for Black and White Men and for Races Combined

	Black Men N=737		White Men N=851		Races Combined N=973	
	Raw	Std	Raw	Std	Raw	Std
Race	--	--	--	--	-.049	-.049
Region	-.019	-.033	-.047	-.061	.044	.062
FaEd	-.003	-.017	-.003	-.012	-.005	-.028
MaEd	.010	.061	.016	.072	.017	.080*
Sibs	-.002	-.025	-.002	-.014	.002	-.017
Income	-.017	-.058	-.007	-.018	-.012	-.031
FaOcc	.000	.092*	.000	.026	.000	.035
Ability	.011	.088*	.025	.157*	.023	.154*
R^2	.036		.044		.049	

imagine that more education would be sought after in an attempt to rectify the discrepancy. Empirically, we would find evidence for such a realignment process by differences in the zero-order correlations between attainment and ability when attainment is measured at the date of interruption and the date of interview. Taking the correlation between ability and final educational as the "standard," we expect to find that the correlation between ability and education level at interruption to be appreciably weaker. We find:

	Black Men	White Men
$r_{\text{ability, final attainment}}$ (for men without full time education interruption) =	.430	.635
$r_{\text{ability, final attainment}}$ (for men with interrupted full time education) =	.429	.637
$r_{\text{ability, first attainment}}$ (for men with interrupted full time education =	.379	.459

Several things are noteworthy in these correlations. First, it does appear that there is some merit to therealignment thesis as both black and white men who resume their schooling have correlations between ability and schooling after resumption almost identical to the ability-education correlation of their continuously going counterparts. Second, we note that the correlations are appreciably lower for black men than it is for white men. These differences in zero order correlations can be interpreted variously; for example, it could be taken to mean that black men of a given ability are less likely to achieve the same, it.e., higher attainment level as do whites. On the other hand, an opposite, and consistent with the data argument could be made that black men overachieve educational attainments for their ability level. The zero-order correlation of course does not provide any information on the wisdom of either interpretation. We will return, in a later section to a discussion of these racial differences.

C. Educational Attainment

Educational attainment level is likely to be important in determining who interrupts schooling if for no other reason than that longer duration in school carries with it a greater risk of interruption. That is, if the risk of interruption is constant throughout one's duration in schooling, then the likelihood of having interrupted schooling is simply greater for those who spend longer in school.* As an exercise, we divided final educational attainment into four categories; less than high school education, high school graduate, some college, and college graduate or more, and computed the corresponding proportion of black and white men who had interrupted their education (see table 13). As expected, there is an increasing proportion of men who interrupt schooling according to education level. Apparently, the incidence of interruption increases rather markedly for those with some college or college graduation as their highest earned education. It is interesting to note that the percentage in each educational category is roughly comparable for the blacks and whites except for the college degree or more category. In this instance, roughly 10 percent more of the whites experience an interruption than do blacks. This appears to be related to the greater number of whites who continue on in postgraduate work--in effect, the interval of opportunity time for interruptions is not comparable for blacks and whites here.

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*Of course, it is unlikely that the probabilities are constant, given pressures to complete a credential and other numerous factors.

Table 13

Percentage of Black and White Men With Interrupted Full Time Schooling by Final Level of Educational Attainment

	Black Men	White Men
Less than high school	2.2 (403)	2.5 (235)
High School Graduate	4.3 (161)	5.6 (229)
Some College	16.9 (124)	13.3 (210)
College Grad or more	28.5 (49)	37.7 (175)

Table 13 About Here

Given the relationships shown in table 13, it is not surprising then, that when educational attainment is added to the regression, the increment to R^2 is about 7 percent, as table 14 shows. We also note that the effects of parental background and ability are diminished appreciably once educational attainment is introduced.

Table 14 About Here

Another feature of educational attainment which is likely to be important in explaining the resumption of full time education is whether the interruption occurred at a logical, i.e. credential level of educational attainment. We imagine that those individuals who stopped short of a degree, for whatever reason and at whatever level, would be more likely to resume their education. To examine this issue, we created a variable to indicate if education at interruption had resulted in a credential (yes=1) or not (no=0). This dummy variable was then added to the previous regression; the results of this analysis are provided in table 15. The coefficients for credential status for both black and white men are negative, indicating as predicted, that not having a credential is a factor in non-continuous pattern resumption. The education coefficient remains much the same as in table 14, suggesting that the effects of credential status operate independently of the level of education. This finding is somewhat contrary to what London (1970) reports who finds that desire to complete a degree or complete education was not an important element in predicting who would use continuing education.

Table 15 About Here

Table 14

Regression of Full Time Interruption on Background Factors and Educational Attainment for Black and White Men and For Races Combined

	Black Men N=137		White Men N=851		Races Combined N=973	
	Raw	Std	Raw	Std	Raw	Std
Race					-.040	-.037
Region	-.015	-.026	.035	.045	.037	.052
FaEd	-.006	-.039	-.013	-.062	-.014	-.070
MaEd	.002	.011	.008	.034	.009	.042
Sibs	-.000	-.032	.005	.044	.005	.049
Income	.000	-.032	.022	.056	-.005	-.014
FaOcc	.000	.050	-.000	-.022	-.000	-.017
Ability	-.003	-.027	-.012	-.076	-.010	-.065
EdAtt	.043	.301*	.075	.457*	.070	.449*
R^2	.096		.151		.152	

Table 15

Regression of Full Time Interruption on Background Factors Educational Attainment and Credential Status for Black and White Men and for Races Combined

	Black Men		White Men		Races Combined	
	N=737		N=851		N=973	
	Raw	Std.	Raw	Std.	Raw	Std.
Race					.028	.046
Region	-.022	-.037	.021	.027	.001	.001
FaEd	-.004	-.025	-.013	-.063	-.010	-.053
MaEd	.001	.007	-.013	-.058	.008	.041
Sibs	-.000	-.005	.007	.062	.002	.026
Income	-.013	.043	.021	.053	.001	.025
FaOcc	.000	.045	-.000	-.011	.000	.008
Ability	.001	-.012	.011	.066	-.006	-.042
EdAtt	.048	.342*	.073	.444*	.062	.415*
Credential	-.116	-.218*	.160	.231*	-.138	-.226*
R^2	.144		.204		.183	

D. Military Service

Service in the armed forces may be involved in use of alternate educational patterns for several reasons. First, full time schooling may have been interrupted by being drafted into the military, or by enlisting under threat of being drafted. Second, military service may provide a means by which schooling, in particular attainment of a high school equivalence degree, may be continued. Or, service in the armed forces by virtue of the veterans benefits may provide the economic means for later continuation in school. So, we are suggesting that military service could be associated for several reasons with interruption and resumption of full time schooling.

As background, we note that 47 percent of the black men and 61 percent of the white men ever served in the military. Of those black men who served in the military, 10 percent had an interrupted schooling pattern. Of those black men who did not serve in the military 3 percent had interrupted full time schooling. For white men, however, the percentages are roughly the same--14 percent with interrupted pattern were in the military, 12 percent with interrupted pattern were never in the military. Because the military screens out eligibles on the basis of mental and other abilities, the differences here (for blacks) could simply reflect the differences in educational attainment levels between blacks who serve and don't serve in the military. As the regression in Table 15 indicates, military service is not a factor in educational interruptions, controlling for educational attainment and ability.

Table 16 About Here

Table 16

Regression of Full Time Education Interruption on Family Background, Educational Attainments and Military Service

	Black Men		White Men		Races Combined	
Race					-.008	-.008
Region	-.022	-.028	.022	.028	.025	.037
FaEd	-.004	-.028	-.013	-.064	-.015	-.074*
MaEd	.000	.004	.013	.059	.014	.065
Sibs	-.000	-.002	.007	.062	.007	.064*
Income	-.012	-.043	.021	.054	.006	.015
FaOcc	.000	.047	-.000	-.011	-.000	-.007
Ability	.002	.019	-.010	-.064	-.009	-.059
EdAtt	.047	.334*	.073	.445*	.070	.445*
Credent	-.117	-.219*	-.161	-.232	-.158	-.235
Military	.020	.039	-.017	-.023	-.005	-.007
R^2	.142		.204		.205	

Unfortunately, the survey did not attempt to learn how full time schooling was financed (although it did for part time education). Consequently, we cannot directly determine the extent to which the veterans benefits provided inducements to continue schooling. In table 17 however, we provide some indirect evidence by determining the timing of the schooling interruption, military service and schooling resumption. We distinguish two situations; one in which the educational interruption and resumption preceeded military service and one in which military service was sandwiched in between the interruption and resumption. The "sandwich" pattern holds slightly more often for blacks and whites, suggesting tentatively that resumption could have been affected by military benefits. We note in passing, that other benefits of military service, possibly as a settling down experience, could equally be of importance here.

Table 17 About Here

We end this discussion of the effects of military service on interrupted full-time schooling pattern by noting that by definition most of the formal education which takes place in the military is part-time. And, we know already that of the part-time education undertaken, a large fraction of it was military education. Consequently, we suspect that military service will be more important in our investigation of continuing, i.e. part-time education.

E. Labor Market Conditions and Experiences

The most likely alternative activity to full-time schooling is participation in the labor market. In the next paragraphs we consider how labor market conditions and labor force experiences while still in school influence interruptions of full-time schooling.

Table 17

Proportion of Black and White Men Who Time Interruption, Resumption Prior to Military Service Entry *

	Black Men	White Men
Interruption and Resumption Prior to Military	.35 (18)	.44 (50)
Interruption before Military and Resumption after military	.65 (33)	.56 (64)
	1.00	1.00
	n = 51	n = 114

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*Proportions are based upon those men who interrupt.

Of particular interest here is whether full time employment is a viable alternative to schooling. We know that employment opportunities for youth certainly differ by age, by locale, by ethnicity and by calendar year. We expect that in years in which unemployment is high, the inducements to enter the labor market are lower and consequently the push to stay in school full time may be greater. In other words, we predict retention to be a function of the unemployment rates at the juncture when a decision concerning staying/leaving school might be made. This hypothesis is scarcely new, having been tested at least as early as 1965 by Beverly Duncan who reported a positive relationship between unemployment rates and school retention rates (Duncan, 1967). Although the hypotheses is straightforward enough, there are certain difficulties in attempting to test it empirically. First, we do not know the date when each individual may have made a decision concerning continuation in full time schooling or not. More than likely, this data was different depending upon the educational attainment level aspired to, economic family conditions and myriad other factors. We arbitrarily set the decision date to be the same--in the year of the eighteenth birthday as most individuals had to make some sort of decision regarding post secondary education at that age.

Another difficulty is the crudeness of the unemployment data to be used. We were able to obtain national unemployment figures for black and white youth aged 17-18 for each year between 1947-1956 (when the men turned 18). The extent to which there is extreme variation, say by region or by urbanicity of locale is not known. That is, the particular prospects for labor market participation might be a lot brighter or dimmer than the national average indicates, depending upon where one is situated.

In table 18, we provide the unemployment figures and the percent having full time interrupted schooling according to birth year. What is particularly interesting is the rather large yearly variation in unemployment rates. For example, a black male turning 18 in 1934 found a relatively "good" labor market with unemployment of 17-18 year olds being 8.1 percent; however black men born four years later would face a quite different set of labor market conditions as unemployment was around 20 percent. We note as well that interruptions in full time schooling are not constant across the birth years either. In particular, we can contrast the incidence of interruption for men born in 1938 and 1935 finding that 18 percent of the white men born in 1935 have interrupted schooling whereas only 7 percent of the white men born in 1938 follow this pattern.

Table 18 About Here

To examine whether these age/race unemployment figures are important predictors of continuation, we regressed interrupted full time schooling status on family background, ability, educational attainments, military service and the appropriate unemployment rate. For the prediction to hold we will have to find a negative coefficient linking unemployment to our interruption variable. This in fact occurs for black men, although the effect is small (see Table 19). Curiously, table 19 also indicates a significant positive effect of unemployment on interruption for white men--a totally unexpected finding.

Table 19 About Here

At this point, we frankly do not know what to make of this unanticipated result. We suspect, but have no data with which to examine the issue,

Table 18

Percent Unemployed and Percent with Full Time Interruptions by Race and Year of Birth

Birth Year	17-18 Age Year	Black Men Pct. Unemp.	Black Men Pct. Int. Full Time	White Men Pct. Unemp.	White Men Pct. Int. Full Time
1929	1947	10.5	8.2	9.4	18.3
1930	1948	17.1	8.0	14.2	18.2
1931	1949	17.7	4.3	11.7	13.3
1932	1950	9.6	9.8	6.7	14.7
1933	1951	10.0	8.1	7.0	10.4
1934	1952	8.1	4.4	7.1	9.0
1935	1953	14.7	9.2	13.0	18.3
1936	1954	12.9	6.8	10.4	10.0
1937	1955	14.9	5.4	9.7	11.1
1938	1956	20.0	6.5	11.2	7.1

Table 19

Regression of Full Time Schooling Interruption on Family Background, Ability, Educational Attainments, Military Service, and Unemployment Rates

	Black Men		White Men	
	Raw	Std.	Raw	Std.
Region	-.022	-.038	.021	.027
FaEd	-.004	-.028	-.014	-.067
MaEd	.001	.004	.014	.062
Siblings	-.000	-.003	.007	.062
Income Ad	-.013	-.043	.021	.053
FaOcc	.000	.047	-.000	-.009
Abil	-.002	-.019	-.010	.064
Educ At	.047	.334*	.073	.445*
Credential	-.116	-.219*	-.161	-.232*
Military	.020	.039	.016	-.023
Unemp.	-.000	-.006	.000	.062*
R^2		.142		.208

that local labor market conditions may vary a great deal and that the national averages may simply be too rough an index with which to address this issue.

Although we cannot satisfactorily address the question of how perceived local labor market opportunities influence interruptions, we can quite accurately examine the role of part-time and full-time labor market participation prior to interruption. One of the main strengths of the retrospective life history design is its ability to examine just this type of issue.

We determined for each respondent the duration in months of full-time and part-time labor market participation from age 14 until the date of first leaving full-time education. For the men who never interrupted/resumed their education the date of first leaving corresponds to the date when they completed their full-time education. For the men who interrupted/resumed, the date considered here is the date of the first interruption.

We note that it is necessary to control for age at leaving school, either at date of final attainment in the case of men who never interrupt or at the date of interruption for those who do interrupt. If age were not controlled, it would be likely to find an effect for duration of these labor market experiences simply because the average age of the men when they interrupted or stopped school was different. The men who inerrrupted/dropped their schooling first around age 18, whereas the continuous enrollers stopped their schooling very near to their 17th birthday. Because of these differences in age, the continuous enrollers will have been in the labor market longer.

We note that participation in the labor force while still in school could have several, differing effects. First, working could be the means by which continuation in school is possible, i.e., we would predict a negative effect of jobs on schooling interruption. Alternatively, it could be argued that jobs held while in school could provide a readily available alternative to schooling and thus be positively associated with interruptions. Because experience with a part-time job may have qualitatively different effects than experience with full-time jobs, we entered two separate variables in the regression (DURPT for part-time job and DURFT for full-time job) (see table 20). Examining the coefficients shown here,

Table 20 About Here

several interesting results emerge. First, duration of part-time employment is a significant (negative) predictor of continuous enrollment for whites but not for blacks. Thus, the argument that part-time work may be used as an economic aid to staying in school seems a reasonable explanation for the whites, but less so for blacks. Second, duration in full-time employment is a positive predictor of interruption for whites, but not for blacks. This suggests the possibility that white men may effectively convert their full-time experience in the labor market prior to completion of schooling into jobs after interrupting schooling.

This conversion process could be a direct one in which the job held prior to schooling interruption was the job held after the interruption. Or, the process could be less direct, by virtue of having employers favor someone having labor force experience over those without such experience. We compared the detailed census code of the full-time job held prior to interruption and immediately after the interruption and found that only 10 percent of the job codes were identical. This indicates that the job held after interruption is quite unlikely to be the same as the job held before; that is, there is little direct transfer of the work situation held prior to interruption to the one held after interruption.

Table 20

Regression of Full-Time Schooling Interruption on Background Factors, Educational Attainments and Labor Market Experiences with Control for Age

	Black Men		White Men	
	Raw	Std	Raw	Std
REGION	-.029	-.049	.018	.023
FAED	-.003	-.021	-.011	-.051
MAED	-.001	-.003	.011	.051
SIBS	.000	.005	.006	.051
INCAD	-.014	-.047	.019	.050
FAOCC	.000	.045	-.000	-.005
ABILITY	-.003	-.024	-.006	-.037
EDAT	.070	.496*	.124	.752*
CRDNT	-.101	-.189*	-.091	-.131
MIL	.018	.035	-.005	-.007
DURFT	.001	.054	.002	.089*
DURPT	-.001	-.056	-.002	-.095*
AGE	-.002	-.244*	-.004	-.469*
UN	-.000	-.006	.001	.048
R^2		.174		.322

We have focused thus far on ways in which labor market conditions can influence a decision to interrupt school. As discussed earlier, a discontinuity in education consists both of a decision to stop and to resume schooling. There are several ways in which labor market factors might influence a decision to resume schooling. One we will consider here is a desire to embark on a new line of occupational career. Certainly, one of the most frequently cited reasons for resuming school is a desire to change occupations. Unfortunately, this factor will necessarily be indirect as we have no first hand evidence regarding the motives or ambitions on the men in the sample at the date they resumed schooling. What we will rely upon as supporting indication is first that the career patterns of men who interrupt their schooling indeed are different from the patterns of men who do not interrupt.

Attempting to answer the question--how are educational patterns related to career patterns?--immediately turns our attention to the difficult problem of characterizing an occupational career (Spilerman, 1977). For our present purposes, we classify each full time job held by the respondent by its prestige score (Duncan and Temme score) and by its Holland score. Although the Holland typology of Realistic, Investigative, Artistic, Social, Enterpreneurial and Conventional types of work has not frequently been used by sociologists as a means of characterizing occupations (exceptions are Gottfredson, 1978) it seems particularly suitable for this present objective. If resumption of education is motivated by a desire to make career changes this effect may be better tapped by Holland's measure than by prestige measures. In other words, it seems likely that strong incentives to change the line of work could come from attempting to better match the "person-environment fit" as well as from attempting to boost one's income or prestige level.

To address this issue, we computed for each person average prestige value across all jobs, the standard deviation and the coefficient of valuation ($\sigma/\bar{X}$). In the case of the Holland classification, we computed the percentage of each man's jobs which were of the same Holland letter (e.g., percentage in R, I, A, S, C, and E). For both the prestige and Holland scores we are interested in primarily the extent of diversity of the jobs held. In the case of prestige, the diversity is indicated by the coefficient of variation ($\sigma/\bar{X}$). In the case of Holland typology, diversity is indicated by the maximum percent of jobs held in the same category. So, if 40 percent of a man's job were in category R, 30 percent in I and 30 percent in S, his "diversity" score (actually similarity) would be .40.

We are interested in learning if men who have interrupted schooling patterns have more diverse occupational careers than do men wo go through school continuously. If this is the case, we should find a higher coefficient of variation for the prestige scores of the men who interrupt and a lower similarity measure on Holland's typology.

In presenting these data we control for educational attainment level and for race. Without controlling for educational attainment, we may confuse the effect of level of education and the effects of how education was attained. Table 21 compares the means, standard deviations and coefficients of variation of all jobs held by pattern of educational activity, by race and educational attainment level. Educational attainment

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Table 21 About Here
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is coded on a scale from 1 to 4 as follows:

1 = less than high school
2 = high school graduate
3 = some college
4 = college graduate and more

Table 21

Occupational Diversity/Similarities by Race, by Educational Pattern and by Years of Schooling Completed

		Black Men						White Men					
	EDUC	CONT*			FT INT			CONT			FT INT		
		$\bar{X}$	σ	V	$\bar{X}$	σ	V	$\bar{X}$	σ	V	$\bar{X}$	σ	V
TEMME	1	24.3	8.8	.36	25.5	7.8	.31	28.7	10.95	.38	26.6	9.2	.35
	2	30.6	10.9	.36	32.5	10.9	.34	32.2	10.88	.34	30.2	13.4	.44
	3	33.9	11.2	.33	36.4	13.0	.36	37.8	8.97	.24	37.1	13.8	.24
	4	39.2	8.9	.23	47.8	15.9	.33	43.8	15.10	.34	42.9	15.5	.34
DUNCAN	1	14.1	4.9	.35	14.9	6.12	.41	17.8	6.66	.37	15.7	6.09	.39
	2	21.4	7.7	.36	14.8	4.21	.28	23.9	7.66	.32	20.1	8.48	.42
	3	30.8	10.9	.35	29.1	11.40	.39	33.1	6.43	.19	32.9	15.49	.47
	4	38.7	11.7	.30	53.5	15.43	.29	47.1	16.10	.34	44.0	19.55	.44
HOLLAND (Similarity)	1	.840			.876			.795			.678		
	2	.658			.526			.693			.772		
	3	.578			.561			.466			.516		
	4	.483			.281			.439			.394		

* Cont = Always enrolled continuously
Ft Int = Interruption in full-time schooling

$\bar{X}$ = Mean value
σ = Standard deviation
V = Coefficient of variation ($\sigma/\bar{X}$)

First, we compare the coefficient of variation for the Temme codes for black men who did and did not interrupt their schooling full time. For black men with some college, or college graduate or more, the men who interrupted do have a more diverse job history. We also note that the level of prestige of the men who interrupted is consistently higher than their continuously enrolled counter parts. For white men, the prestige scores of those who interrupt is typically lower, on average, than is the score of those who go through continuously. And men who were in school continuously seem to have equally as diverse job histories, with the exception of those who are high school graduates. From the comparison of the Temme codes, no clear pattern for either blacks or whites emerge; that is the data do not support the view that greater job diversity is associated with interrupted schooling.

It is interesting then that the use of the Duncan score suggests somewhat different interpretation. In particular, the coefficient of variation (V) comparison for the whites, suggests rather strongly that interruption is associated with greater diversity. For black men, there is no consistent pattern. The effect for whites is particularly interesting given the lower agerage prestige value for all attainment levels for men with interrupted schooling.

Another index of the similarity/diversity of jobs held pertains to the Holland type of work. Here (the third section of table 21) a lower value of the similarity code would indicate more diverse work histories. This pattern is violated by the black men who end up with less than a high school education, i.e., the more diverse pattern is held by those enrolled continuously. For white men, there is no consistent pattern.

From these comparisons, it seems that interruption/non-interruption in full time schooling is not related systematically to work history diversity. Three indicators of job status, Temme (1975), Duncan prestige and Holland type of work do not all exhibit the same pattern for both races. The only consistent comparison case was the Duncan score for white men which does consistently show more divergent histories for discontinuous educational attainment. In summary, although the desire to enter a new line of work or to make rapid progress in ones present line of work may motivate resumption of schooling, there is only limited support to claim that this effect indeed results. We caution that a more stringent test would compare the pattern of the jobs held prior to the interruption with those held after the interruption. We did not carry out this comparison because of the considerable computer expense involved in this procedure which did not seem justified on the basis of the present information.

F. Marriage and Family Formation

As with other factors we have considered, marriage and family formation can be argued to influence who interrupts their education for several and quite different reasons. On the one hand, marriage to a working wife could serve as a means by which continuous schooling is assured. That is, the stereotypical view of the wife working to maintain the economics of the family while the husband is in school may actually have salience. On the other hand, it seems equally plausible to suggest that marriage, especially after children are born, might serve to disrupt schooling, if for no other reason than financial and logistic burdens of a growing family.

As a starting place, we note that relatively few of the men married before they were out of full-time schooling. Roughly 90 percent of the men were married after they had last left full-time education. As table 22 indicates, however, there are differences in the proportion of men marrying

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Table 22 About Here
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before or after full-time education was completed, depending upon the pattern of educational activity. For men who are always in full-time education, the overwhelming majority are married after school is completed. Men who have interrupted education are much less likely to follow this ordering. About half the white men and two-thirds of the black men who interrupted their schooling were married before they last left full-time education. Similarly, those who pursued part-time education were not as likely to follow the typical ordering pattern as were the men always in full-time schooling, although the differences are slight.

The proportions in table 22 indicate that the timing of marriage and school leaving are related, but provide no evidence about the possible mechanisms by which this effect comes about. In an attempt to get a better handle on the timing issue, we compared the date at marriage and the date of interruption and resumption of schooling for those who had interrupted full-time education. For the white men, 97 percent had married after the date of interruption; for the black men 93 percent followed the interruption with marriage. Consequently, it seems unlikely that marriage, per se, was directly an element in the interruption since so few had married by that juncture. About three-quarters of the whites were married after resuming their full-time studies; around eighty percent of the black men followed this pattern. We note that between the time of resuming education and completing education, roughly another 25 percent of the men married. From these comparisons of the timing of marriage we suggest that taking a wife was not immediately a factor in the interruption, although it may be in the decision to resume schooling.

Table 22

Proportion of Black and White Men who Marry After Last Leaving Full Time School by Pattern of Educational Activity

	Black Men	White Men
Always Full time	.976 (416)	.949 (338)
Interrupted Full Time	.695 (46)	.455 (101)
Part Time	.929 (211)	.884 (365)

Given the circumstantial nature of the evidence here, it is important to suggest a likely mechanism by which resumptions of schooling could be affected by marriage. The most likely way for marriage to affect resumption is through the economic support a working wife may bring to the husband. If this is the case, then we should find differing proportions of working wives between the men who never continue and those who do continue. As table 23 suggests, the men who had interrupted full-time schooling were more likely to have a working wife than were those who went through school continuously or even with part-time education.

Table 23 About Here

However, the differences in the proportions, particularly for black men are small. Consequently, we conclude that family formation does seem to be implicated, but that our results do not warrant overinterpretation of its effect.

G. Summary

Using a life cycle framework as a starting point we have attempted to learn what factors are related to interruption of full-time education. We began by distinguishing two components to a discontinuity--an interruption and a resumption and noted events, such as marriage, or experiences, such as part-time work, may be related differently to interruptions and to resumptions. Where it was possible to do so, we examined the timing of events and the timing of the educational interruption and resumption in an attempt to determine whether the event occurred prior to the interruption, after the interruption but before the resumption, and after the resumption. This procedure was used in examining for example, the role of military and the role of marriage in discontinuities.

Table 23

Proportion of Men With Wife in the Labor Market by Educational Pattern Type and Race

	Black Men	White Men
Always Full Time	5.9 (439)	5.6 (353)
Interrupted Full Time	7.8 (51)	10.5 (114)
Part Time Education	6.4 (247)	8.3 (384)

Two sets of factors emerged as predictive of discontinuities. The first factor of importance is simply the amount of education attained and whether a credential had been earned when education was interrupted. We interpret this education result in a quite straightforward manner. Attaining more schooling carries with it an added risk of greater interruption simply because of the greater number of years possible. Second, if education is stopped at an illogical place, e.g. short of a recognized credential, then education is more likely to be resumed later.

Early labor market experiences were also important in predicting who goes through school continuously and who does not. In particular, part-time work while still in school was associated with staying in school continuously for white men but not for blacks. We interpret this effect to mean that part-time work is an economic mainstay for pursuit of education full-time. Concerning the racial differences in the effect of part-time education, we noted first that the proportion of black men who held part-time jobs while in school was much smaller than their white counterparts. The severe limitation of the range of this variable for black men was seen as the likely source of the non-effect.

In summary, this chapter has added to the understanding of the causes of discontinuities in schooling by confirming the lack of effect of family background and by suggesting the importance of credential status and simultaneous labor force experiences. However, we end this summary on the pessimistic note that we still do not understand much about causes of educational discontinuities. We can imagine how situational factors and personality characteristics engage to produce specific patterns. Rubenson's framework of expectancy and valence still has intuitive appeal as an appropriate paradigm for studying schooling discontinuities. However, until better data concerning both the situation as presented and as perceived are available, our understanding will probably remain limited.

IV. Factors Related to Part Time Education

A. Introduction

In our description of educational patterns, we distinguish between resumption of education on a full-time and part-time basis assuming that qualitative differences may exist between these two types of participation. We make this distinction for several reasons. First, the costs, both in terms of time and economic resources required, are significantly greater for resumption of education full-time. Second, the motives for study are likely to be quite different in the two cases. Pursuit of education part-time may be activated by quite diverse motives. Economic or occupational goals may be important in resumption part-time as well as full-time. But, in addition it is easy to imagine that resumption of education part-time may be motivated by a desire for self-improvement or self-actualization which has little direct relationship with attempting to improve occupational opportunities or economic situations.

There has been considerable research related to the general topic of adult education; this term usually implying taking of part-time educational courses. On the main these studies have been descriptive. Details of the age, race, marital and socio-economic status, urban/rural location, and formal education of participants are frequently described (Johnstone and Rivera, 1965; Rubenson, 1977; London, 1970). From these descriptions, a relatively clear picture of who participates in adult or continuing education emerges. White males, with at least a high school diploma, married and living in or near an urban location are likely participants. From these descriptions, however, it is not clear what motivates or hinders individuals in pursuing education part-time.

A particular instance of this general lack of explanation for the findings is the observation that individuals in white collar occupations and with a fair amount of formal education are most likely to participate. Indeed, the amount of formal education a person has is the single most important predictor of pursuit of education part-time.

London (1970) in an unusual attempt to provide an explanation for the formal education association suggests several possible reasons. He proposes that education may be important because of the operation of:

1) Self-selection factors, i.e., individuals who persist in school to attain high degree status like school, find it comfortable and will therefore return.

2) Occupational bias in course offerings, i.e., white collar workers who are required to take courses as part of their work create a demand for the courses and eventually have courses designed to appeal to them.

3) Class bias in style of participation, i.e., lower SES background persons prefer informal participation, which is rarely the way courses are offered.

4) Economic reasons, i.e., individuals with less formal education tend to earn less money and have less spare dollars for pursuit of education.

Douglah and Moss (1968) offer the suggestion that reasons for participation differ by SES. They suggest that low SES individuals participate because of economic motives such as desire to advance to another occupation. High SES individuals on the other hand, participate more out of a desire for self-improvement, or self-actualization. If their suggestion is true, then there should be some clear differences in the type of courses taken and even in the occupational effects of enrollment in part-time education by SES background. This issue will be examined subsequently in this section.

B. Procedure

Our definition of part-time education includes any vocational, academic or military course or training whether it was degree oriented or not. Educational activity was deemed part-time if it took place for less than the normal definition of full-time, e.g., taking one course during one semester in college.

There will be a slight underrepresentation of part-time educational activities because of the way we have defined educational activity pattern. Because we wanted a unique pattern code, those men who interrupted their full-time schooling and who also took part-time courses are not counted as part-time education participants. We could have created another pattern code--full-time interruption and part-time resumption--however, as the case base for full-time schooling interruption is small (n=51 for black men and 114 for whites), we did not wish to do so. We suggest that the errors introduced by not counting these men will be slight. For black men 35.4 percent were involved in part-time education. Excluding those who had interrupted full-time, the percentage becomes 33.5. For white men 50.8 percent had some part-time experience, while 45.2 percent were uniquely in the part-time category. In subsequent analyses in part 5 where we are concerned with the effects of part-time education, these part-time experiences are included, however.

C. Family Background

The previous research is somewhat ambiguous as to the anticipated effect for family background. In the several instances when an effect of family background has been noted, this effect has been based on a classification of parental SES and childs participation without controls for childs educational attainment level. In other instances which have employed this attainment control the effects of family background diminish appreciably. So, as London (1970) concludes what seems to be important is not so much family background but what education and occupation status one has achieved to that point.

Our examination of the role of background characteristics starts with the observation that black and white men appear to have differing incidence of use of part-time education. As noted previously, almost half of the white men were involved in part-time education at least once whereas closer to a third of the black men were so involved. In examining how the background characteristics are related for the black men and white men (see table 24), it is surprising to find that the predictive power of these factors is relatively larger for blacks than whites (although small for both) 8 percent vs. 4 percent. Additionally, it appears that different factors are important for blacks than for whites in predicting participation. Father's occupational prestige is positively and significantly related to participation for blacks, but not for whites. Ability is a strong predictor of participation for both races, but we recall here that controls for educational attainment will likely diminish this effect. Second, the number of siblings in the family of origin is negatively associated with participation for white men. A reasonable interpretation of this would be that economic constraints of a large family necessitate changing from full-time to part-time status. However, if this interpretation is correct, we would have expected to see a larger effect for income adequacy than is evident from table 23. On the whole, family background factors seem to be more important predictors of participation in part-time education activities for blacks than whites, although in both cases the extent of variance explained is less than 10 percent.

Table 24 About Here

D. Educational Attainments

Educational attainment is the single most important predictor of participation in adult education according to numerous participation studies (e.g., Rubenson, 1977; London, 1970; Douglah and Moss, 1968). Moreover, educational attainments are reported to largely mediate the effect of family background characteristics once they are considered. To examine the effect of educational attainment and in addition the effect of credential status, we carried out the necessary regressions separately by race and then with the combined weighted sample. The results of the regressions in which educational attainment and credential status have been added are displayed in table 25. We note that for black men, the effect of father's occupation noted in the discussion of table 24 is diminished appreciably by the addition of educational attainments. Ability still keeps its strong effect for black men, however. For white men, the same effects for educational attainment and credential status are observed, but the negative effect of number of siblings does not appear to be entirely mediated by the educational attainments. We note again, the unusual

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Table 25 About Here

Table 24

Regression of Part Time Educational Activity on Background Factors for Black and White Men and for Both Races Combined

	Black Men n = 737		White Men n = 851		Races Combined n = 1588	
Race	NA		NA		.003	.003
Region	.069	.063	.061	.054	.005	.016
FaEd	-.005	-.017	.010	.034	.057	.059*
MaEd	.014	.044	-.010	-.033	-.002	-.006
Sibs	-.003	-.029	-.015	-.019*	-.008	-.055*
Income	-.003	-.006	-.016	-.027	-.014	-.026
FaOcc	.000	.089*	-.000	-.062	.000	.003
Ability	.050	.221*	.034	.145*	.041	.190*
R^2	.081		.044		.065	

Table 25

Regression of Part Time Interruption on Background Factors Educational Attainment and Credential Status for Black and White Men and for Races Combined

	Black Men		White Men		Races Combined	
	Raw	STD	Raw	STD	Raw	STD
Race	NA	NA	NA	NA	.015	.016
Region	.070	.063	.049	.044	.047	.048
FaEd	-.009	-.030	.006	.019	-.006	-.020
MaEd	.000	.000	-.011	-.036	-.011	-.035
Sibs	-.002	-.015	-.012	-.077*	-.005	-.034
Income	.005	.010	-.010	-.018	.001	.001
FaOcc	.000	.051	-.000	-.072	-.000	-.035
Ability	.030	.130*	.019	.083	.012	.057
EdAtt	.073	.276*	.029	.123*	.082	.320*
Credential	-.095	-.095*	-.075	-.075*	-.088	-.090*
R^2	.133		.057		.126	

finding that the predictive power of the background and educational factors is stronger for blacks than it is for whites. The R^2 for whites in this instance is around five percent, scarcely impressive evidence of the importance of these factors.

In discussing the reasons for resuming full-time education, we suggested that men who had not attained the education one might expect for a certain ability would be more likely to return to school. In examining reasons for resuming part-time education, it seems likely that the same sort of reasons might be in operation. Given that we find distinct racial differences here in the persistence of the ability measure for black men, we examine this separately by race. We note first of all that ability and educational attainments show an appreciably lower correlation for blacks than whites (see table 26).

Table 26 About Here

This lower correlation could be consistent with several, contradictory, interpretations. First, it could imply that blacks overachieve, that is, relative to their ability, their educational attainments are overinflated. Alternatively, the argument could be made that they underachieve, that is, relative to their ability, their educational attainments are less than what would be expected. To examine this in more detail, we determined the average ability level by attainment level for blacks and whites (see table 27). These data suggest that contrary to what might be argued from a "structural impediments" point of view, that black men of a given ability in fact achieve higher educational attainments than their white counterparts.

Table 27 About Here

Table 26

Correlations of Ability and Educational Attainments for white and black men with differing educational activity patterns

Pattern	Black Men	White Men
Never interrupted	.430	.635
Interrupted full time		
final attainment	.429	.637
attainment at interruption	.379	.459
Part-time education		
final attainment	.381	.527
attainment at interruption	.335	.490

Table 27

Verbal Ability, Educational Attainments

	Attained by Race					
	White Men			Black Men		
	$\bar{x}$	σ	n	$\bar{x}$	σ	n
Grade School or less	3.8	1.9	112	3.2	1.8	171
Some High School	4.9	1.5	117	4.2	1.7	223
High School Graduate	5.7	1.7	224	5.1	1.8	154
Postsecondary (some college)	6.6	1.5	202	5.6	2.0	115
College Grad.	7.8	1.5	106	6.3	1.3	40
Post Graduate	8.5	1.6	65	7.7	1.9	9

On the basis of a simple zero-order correlation, we would certainly not wish to offer any strong interpretation. However, the correlations in table 27 do raise the issue of the equivalance of meaning of years of schooling for black and white men. This issue will be discussed later, in section 5 when we examine racial differences in returns to schooling.

Returning now to the realignment thesis, we are impressed by the fact that the correlations for men who use part-time education are appreciably lower than for other educational activity patterns. This lower correlation may be due to the great mixture of educational experiences covered by part-time education. A refrigeration school course and attainment of a Ph.D. could both be earned part-time. So, the lowered correlations here could in part reflect the diversity of meaning of the educational variable itself. Even given this, we do see that the correlation between ability and final attainment is higher than that of ability and attainment at interruption for both blacks and whites. Consequently, it seems possible that part-time education may be used to realign ability and education, although the argument is much less persuasive here than in the case of full-time schooling.

E. Military Service

We know that a substantial portion of the part-time education which takes place is undertaken while in the military (see table 2). Consequently, it is likely that once military service status is added to the regression, the overall predictive power should be improved substantially. However, service in the military may have additional effects, such as provision of subsidies for continuation of education. Also, if additional credentials or degrees were earned directly as a result of service in the military there may be an extra effect of military service on attainment level and thus indirectly on later participation.

We turn now to considering the effect of military service on part-time education. Our procedure entailed entering a dummy variable for military service, along with family background factors and educational attainments at the time of military service entrance. Table 28 contains the standardized and unstandardized coefficients for this equation.

Table 28 About Here

As predicted, military service has a strong and positive effect on using part-time education, for both black men and white men. However, military service appears to be more strongly connected with part-time education for whites than it is for blacks. This pattern arises apparently because racial differences in utilization of part-time education both while in and later out of the military. First of all, for those men who served in the military, white men are proportionately more likely to participate in educational programs (27 percent vs. 19 percent). And, repeating the pattern discussed in section 2, white men are more likely to take degree oriented military courses when they do participate. The view of the military as being another way to complete a high school education is not entirely false, but it is more true for whites than it is for blacks.

Another way that military service may impact education is by providing subsidies for study later on. Possibly white men who were eligible for this benefit utilized it relatively more often than their black counterparts. Unfortunately we do not know the extent to which the men in the sample were eligible for military educational benefits.

Table 28

Regression of Part Time Education Interruption
on Family Background, Educational
Attainments and Military Service

	Black Men		White Men		Races Combined	
	Raw	STD	Raw	STD	Raw	STD
Race	NA	NA	NA	NA	.008	.008
Region	.065	.060	.033	.030	.038	.039
FaEd	-.013	-.044	.010	.034	-.004	-.015
MaEd	-.005	-.014	-.017	-.056	-.017	-.053
Sibs	-.000	-.004	-.011	-.070	-.003	-.023
Income	.006	.011	-.016	-.028	-.001	-.002
FaOcc	.000	.062	-.000	-.070	-.000	-.027
Ability	.022	.099*	.015	.065	.007	.032
EdAtt	.063	.238*	.028	.117*	.074	.289*
Credent.	-.100	-.100*	-.064	-.064	-.088	-.090*
Military	.170	.177*	.252	.248*	.207	.211*
R^2	.159		.117		.166	

F. Labor Market Experiences

One frequent finding has been the association between occupational position and the use of part-time education. Some authors have argued that part-time courses are tailored to suit white collar workers needs both in format and content. For this reason, we might expect that the prestige of the first job held* would positively predict participation in part-time education.

On the other hand, it has also been argued that part-time education is used to help embark on another career path. If this interpretation is true, we might find that a lower occupational status is associated with participation. To examine this issue, we regressed participation in part-time education, on indicators of family background, educational attainments and prestige of first job separately for black men and white men. Here we utilized three definitions of part-time education 1) PTED = any enrollment in any course part-time 2) DGORT = enrollment in a degree oriented course and 3) EDJMP = enrollment in degree oriented course with subsequent shift in attainment level. The results of these regressions are given in table 29.

Table 29 About Here

First of all we note that the pattern of greater predictive power for the black equation is not consistently true once we consider the nature of the part-time enrollment. For DGORT and EDJMP, the familiar pattern of equal or higher R^2 value for whites is seen. For both black and white men, the definition of part-time education is important in determining which factors are relevant, i.e. the patterns are not consistent across

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*This first job is defined to be the first job held after last leaving full-time education.

Table 29

Regression of Part-Time Education on Background Factors, Educational Credentials and Prestige of First Job

	BLACK MEN						WHITE MEN					
	PTED		DGORT		EDJMP		PTED		DGORT		EDJMP	
	Raw	Std	Raw	Std	Raw	Std	Raw	Std	Raw	Std	Raw	Std
FaEd	-.017	-.058	-.018	-.080	-.000	-.000	.006	.020	-.018	-.043	.002	.010
MaEd	.021	.067	.022	.093	.021	.104	-.010	-.033	.008	.020	.018	.072
FaOcc	.000	.137*	.000	.060	-.000	-.021	-.000	-.019	.000	.063	.000	.100
Ability	.044	.194*	.018	.109*	.016	.114*	.050	.209*	.019	.060	.046	.239*
Edelf	.037	.119*	.030	.133*	.005	.028	.009	.031	.061	.158*	-.037	-.164
Crdelf	.014	.015	-.013	-.019	.083	.138*	-.024	-.024	-.028	-.020	.050	.062
Prestige	-.000	-.043	-.000	-.021	.000	.002	.000	.071	.000	.113*	-.000	-.008
R^2	.103		.053		.069		.063		.086		.069	

all definitions. For black men, an exception to this statement is the positive effect ability has on all definitions of part-time education activity. Otherwise, the particular variables which are important differ by race and by definition of participation.

We wish to assess here the extent to which the prestige of the first job is implicated in a decision to resume schooling part-time. For the black men, it appears that occupational position is relatively unimportant in predicting who will use part-time education. For white men, occupational prestige is important only in explaining degree oriented pursuits. This finding could indicate that the men were taking job related courses, a more likely situation for men in higher prestige jobs. But, given the strong effect of educational attainment on participation in degree oriented programs, it seems likely that participation may also come about because education has been found to be an agreeable activity (i.e., the selection effects argument).

Summary

Participation in part-time education is a prevalent form of educational involvement for black and white men in the life history sample. About half the white men were involved in a part-time course at least once, about one-third of the black men were so involved. Part-time education covers a range of types of schools and courses of study. Vocational schools, business schools, TV courses, private tutoring, all fall under the rubric of part-time education providors. Courses taken to earn a degree or credential as well as courses taken to learn a hobby are also included in part-time education.

Considering the wealth of these types of schools and contents of schooling, it is perhaps not too surprising that the "stock" background variables used in status attainment models do not predict very well part-time participation, for either blacks or whites. But of the two groups the variables tapping family background, educational attainments, military service and labor force experience seem to be relatively more powerful for predicting participation for black men than white men. In attempting to understand this better, we narrowed the definition of part-time education to include courses taken which led to a jump in attainment and courses taken which were degree oriented. Once part-time education was more narrowly defined, the usual pattern of greater predictive power for whites was seen. However, in no instance did the R^2 value exceed 20 percent so that we can hardly claim to have understood part-time participation very well.

We note that the main difference in the patterns of effects was the persistence of the ability measure in predicting participation for black men. There is a consistent and positive effect of ability on participation in part-time education which is not entirely mediated by educational attainments, credential status or service in the military. At this point we were unable to offer a consistent explanation for this ability effect; a fuller treatment of the effects of ability and educational activity pattern will be undertaken in the next section.

V. The Occupational Effects of Using Alternate Educational Routes

A. Introduction

The two preceding sections examined the relationship between a variety of background and experiential factors and pursuit of education through non-standard routes. We now turn our attention away from the antecedents of to the consequences of using alternate educational patterns. In this discussion, we will focus on labor market attainments, specifically occupational status. Our interest in understanding black and white differences in the transition from education to work will also be evident here as we attempt to isolate specific factors which might account for the observed differences.

The discussion in the two previous sections suggested that different factors may motivate resumption of schooling part-time and interruption of schooling full-time. These findings indicate then that these two types of discontinuities should analytically be treated as distinct patterns. In addition, for clarifying the effects of alternate patterns, a theoretical distinction between these two patterns is needed. Some additional discussion of the assumptions in the status attainment literature is informative here.

In the usual formulation of empirical assessments of the importance of educational attainments on occupational achievements, we have:

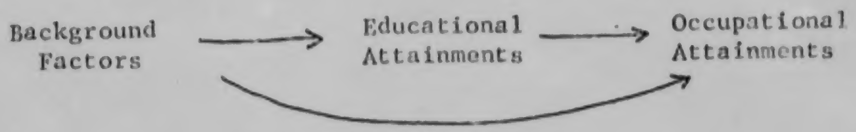

Figure 2

Usual Formulation of Education to Work Linkages

This model typically uses a single indicator of educational attainment, corresponding to the view that individuals go through school continuously and then enter the labor market, without any additional schooling ever undertaken. We know, however, that this assumption isn't true for a good proportion of individuals. That is, the model might more accurately reflect educational and occupational experiences if it were changed to look like this:

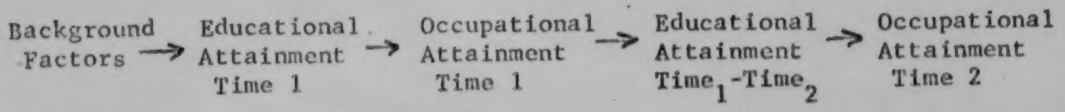
Background Factors
Educational Attainment Time 1
Occupational Attainment Time 1
Educational Attainment $Time_1$-$Time_2$
Occupational Attainment Time 2

Figure 3

Status Attainment Model Incorporating Educational and Occupational Changes

This specification would permit examination of the role of educational attainments earned simultaneously with career attainments, that is, it would permit appropriate specification of the timing of education and work.

Another distinction to be added to the usual formulation is between full-time and part-time schooling. That is, besides incorporating some indication of the timing of events, we also wish to distinguish between major and secondary activities. Actually, this distinction is easily incorporated once we have clarified the definitions of educational and occupational attainments at various junctures in the life cycle. Some examples of present imprecisions in definitions may make the point clearer. Such phrases as "first job" or "highest grade completed" or "finished schooling," are so ambiguous as to make their usage inappropriate for marking positions in the transition process. By first job, we could include any full-time employment, regardless of duration or of other intermittent full-time activities such as schooling. But, it is unlikely that we are really interested in "first job" so broadly defined. To continue pointing out some of the definitional problems, the point at which an individual finished his schooling is not clearly defined either. For example, if an individual graduated from high school and then took several part-time courses in TV repair, at what time did he complete his schooling, and what is his attainment? This last example points out the twin difficulties of dealing with part-time and full-time schooling and with academic and vocational attainments. Our typical view of educational attainments is usually a one dimensional construct paralleling years of academic schooling completed. Part-time study, if academic in nature, can be accommodated in this view as partial years. But, vocational education is not so tidily incorporated as it is impossible to add this onto the years of schooling scale without making a priori assumptions about the value of vocational education vis-a-vis academic attainments. Making such assumptions hardly seems justifiable since one of the debateable issues is the occupational worth of vocational vs. academic education. Educational attainments, then, like occupational ones, may in the end more properly be viewed as a multidimensional sort of outcome, with vocational and academic training being two possible axes.

Some of the definitional ambiguities are resolved by defining as first job the first job held after last leaving full-time education.[1] Then educational attainments at time_1 are the attainments earned prior to entry in the labor market. We add to the model in Figure 5, an indication of whether this full-time schooling was attained continuously or not. The educational attainments after entrance into the labor market (i.e., between time_1 and time_2) then refer to part-time activities. We will differentiate these activities according to whether they are vocational, academic, degree or non-degree oriented. Figure 4 then depicts the modifications we have made to the basic model in order to assess the effects of discontinuities and resumptions.

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[1] This definition of entry into the labor market is consistent with Ornstein's (1976) definition.

Background Factors → Educational Attainment at entry to Labor Force → Discontinuity → Occupational Attainment at Entry → Educational Activities in Interval from Entry to Entry +10 Years → Occupational Attainment 10 Years Later

Figure 4

Educational and Occupational Linkages

We place the discontinuity variable between the educational and occupational attainment because we are interested in learning if the pattern of attainment in addition to the level is an important factor in occupational achievements. In short, does it make any difference whether full-time schooling was interrupted or not?

B. Procedure

Before presenting the results of the various regressions aimed at addressing these issues, one additional procedural note is needed. A small proportion of the men (less than five percent) had as their first job according to this (Ornstein 1976) definition, service in the military. Because military service does not have prestige scores assigned, this posed additional problems. Rather than deleting these individuals, we took as their empirical first job the next one held after military service was completed. Because some of the men were always in the military, we deleted these individuals from the sample. Also, those individuals who were not in the labor market for a ten year interval were deleted. After this sample deletion, we had a total of 1192 men, 563 blacks and 629 white men.

The analyses were carried out separately by race. In these analyses we seek to clarify two issues. First, we wish to learn if there is a deleterious or beneficial occupational result of interrupting full-time education. Second, we wish to examine the occupational effects of pursuing part-time education after entrance into the labor market. In this examination, we characterize participation in part-time education by six different measures:

1) [illegible] any participation in part-time education
2) EDJMP, participation resulting in degree or level change
3) DGORT, enrollment in degree oriented academic program
4) DURPT, duration of part-time participation
5) VOCN, enrollment in vocational or technical course with or without attainment certificate
6) VOCC, enrollment in vocational or technical courses with certificate attained

B. The Occupational Effects of Interrupting Full-Time Schooling

Tables 30 and 31 provide the results of the regressions aimed at estimating the parameters of the model depicted in Figure 6. The first

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Tables 30 and 31 About Here

Table 30

Effects of Educational Activity on Prestige of First Job Held and Job Held Ten Years Later for Black Men

Black Men (N = 563)				PRESTIGE of JOB + 10 YEARS*						
	1 Edelf	2 Intft	3 Pst-1	4* Edjmp	5* Pted	6* DG ORT	7* Dur Pt	8* Voc-No C	9* Voc-Yes C	10* *****
FaEd	.080 (.083)	-.011 (-.083)	4.901 (.084)	1.626 (.022)	2.209 (.031)	2.647 (.037)	1.830 (.025)	1.876 (.026)	1.42 (.020)	1.62 (.023)
MaEd	.168* (.161)	.008 (.055)	-2.578 (-.040)	-2.271 (-.029)	-2.257 (-.029)	-2.929 (-.037)	-1.950 (-.025)	-1.790 (-.023)	-1.32 (-.017)	-1.62 (-.021)
FaOcc	.002* (.146)	-.000 (-.034)	0.100* (.134)	-0.023 (-.025)	-0.036 (-.040)	-0.035 (-.038)	-0.024 (-.027)	-.031 (-.035)	-.021 (-.024)	-.025 (-.027)
Ability	.245* (.337)	-.001 (-.011)	5.322* (.120)	8.601* (.159)	8.033* (.148)	8.066* (.149)	8.760* (.162)	8.93* (.166)	9.09* (.168)	9.14* (.169)
Edelf		.054* (.378)	18.482* (.303)	22.660* (.304)	21.157* (.284)	20.840* (.280)	22.781* (.306)	22.14* (.298)	22.15* (.298)	22.63* (.304)
Crdelf		-.071* (-.161)	-4.800 (-.025)	14.057 (.060)	17.444 (.075)	17.363 (.075)	16.981 (.073)	17.41 (.075)	16.05 (.069)	16.81 (.073)
Durft		-.002 (-.065)	0.154 (.015)	0.502 (.039)	0.414 (.033)	0.644 (.051)	0.532 (.001)	.472 (.038)	.518 (.041)	.513 (.041)
Durpt		-.001* (-.095)	-0.167 (.028)	-0.030 (-.004)	-0.010 (-.001)	0.036 (.005)	0.012 (.042)	.011 (.001)	-.020 (-.002)	.013 (.002)
Intft			16.248 (.037)	-2.165 (-.004)	12.507 (.023)	-1.516 (-.002)	0.757 (.001)	2.44 (.004)	1.76 (.003)	.316 (.001)
PST				0.242* (.198)	0.246* (.201)	0.247* (.202)	0.242* (.198)	.246* (.201)	.246* (.201)	.242* (.198)
EdAct				32.188* (.084)	25.901* (.107)	58.945* (.180)	0.159 (.043)	9.85 (.004)	56.35 (.007)	--
R^2	.261	.115	.195	.306	.309	.330	.301	.301	.304	.300

Table 31

Effects of Educational Activity on Prestige of First Job Held and Job Held Ten Years Later for White Men

White Men (N=629)				PRESTIGE OF JOB + 10 YEARS*						
	1 Edelf	2 Intft	3 Pst-1	4* Edjmp	5* Pted	6* DG ORT	7* Dur Pt	8* Voc-No C	9* Voc-Yes C	10* *****
FaEd	.201* (.185)	-.008 (-.047)	-2.59 (-.031)	-1.497 (-.017)	-1.554 (-.017)	-.981 (-.011)	-1.253 (-.014)	-1.58 (-.018)	-1.26 (-.016)	-1.258 (-.014)
MaEd	.170* (.154)	.003 (.018)	.109 (.001)	-1.150 (-.013)	-.061 (-.000)	-.646 (-.007)	-0.541 (-.006)	-.288 (-.003)	-.52[illegible] (-.006)	-.526 (-.006)
FaOcc	.001* (.121)	-.000 (-.029)	.080* (.075)	.085* (.078)	.102* (.094)	.092* (.085)	.097* (.090)	.102* (.094)	.098* (.090)	.098 (.090)
Ability	.355* (.424)	-.005 (-.042)	4.98 (.077)	5.260* (.079)	5.454* (.081)	6.728* (.101)	7.039* (.105)	6.65* (.100)	7.03* (.106)	7.044 (.105)
Edelf		.061* (.391)	36.74* (.473)	25.105* (.316)	22.227* (.279)	22.614* (.284)	23.480* (.295)	23.13* (.291)	23.49* (.296)	23.499 (.295)
Crdelf		-.032* (.057)	1.12 (.004)	-.092 (-.000)	3.411 (.012)	2.145 (.007)	1.838 (.006)	2.39 (.008)	1.65 (.006)	1.809 (.006)
Durft		-.001* (-.068)	-.309 (-.027)	.848* (.068)	.850* (.068)	.870* (.070)	.898* (.072)	.883* (.083)	.901* (.072)	.899 (.072)
Durpt		-.001* (-.103)	.308 (.041)	.646* (.084)	.646* (.084)	.718* (.093)	.700* (.091)	.700* (.091)	.701* (.091)	.701 (.091)
INTFT			-4.770 (-.010)	41.179* (.081)	59.876* (.119)	38.516* (.076)	39.303* (.078)	41.48* (.083)	39.17* (.078)	39.294 (.078)
PST_1				.256* (.251)	.247* (.241)	.246* (.241)	.255* (.249)	.260* (.254)	.256* (.250)	.256 (.249)
EdAct				40.280* (.115)	32.211* (.127)	15.254* (.074)	.002 (.002)	15.14 (.050)	5.73 (.006)	--
R^2	.420	.102	.302	.430	.432	.423	.418	.421	.419	.419

two columns of these tables repeat results presented previously in the section concerning factors related to interrupted full-time education. Column 3 contains the effects of background factors, educational attainment at entry into labor force, and interrupted status on prestige of first job. Columns 4-9 contain the direct effects of the measures of family background, educational attainments, prestige of first job, and educational activities on prestige of job held ten years later. Each column (i.e., 4-9) utilizes a different indicator of educational activity, i.e., PTED, EDJMP, DGORT, DURPT, VOCN and VOCC: Column 10 gives the regression results without any part-time education included.

We turn now to examination of column 3 which gives the effects of interrupted full-time education on prestige of first job controlling for background, educational attainments and labor force experience while in school.

As has been frequently documented, the combination of background factors and educational attainments do not predict the prestige of the first job as well for black men as they do for white men (R^2= .195 vs. .302). That is, the results contained here do not deviate in any important respect from results reported by others concerning the racial differences in prestige of first job. Similarly, concerning the effect of the interrupted schooling pattern, we find as did Featherman and Carter (1976) that the interrupted pattern does not have a deleterious or beneficial effect on the first job attained. We do note that the direction of the association between interrupted full time job and prestige differs for black men and white men.

However, when we examine the effects of interrupted schooling pattern on the job held ten years after entry into the labor market, we do find significant and positive effects for whites, but not for blacks. This finding would be consistent with the indirect evidence that interrupted patterns may be associated with atypically fast career rises (Duncan, Featherman and Duncan, 1976). We need to explore why these benefits of full time schooling interruption may accrue for whites but not for blacks.

There are several possible and plausible explanations for these results. First, we know that black men have lower educational attainment levels and also lower rates of interrupted schooling. Consequently, it is possible that we are witnessing here still an effect of education level.

Another explanation of the finding could follow from the fact that there are differing rates of completion or credential earning for blacks and whites who interrupt their schooling. Given that black men who interrupt their education are less likely to convert their resumption into a change in credential status, employers may view the interruption-resumption pattern negatively. So, the interrupted sequence may have a positive payoff for whites because they typically end up with a credential in hand after the resumption. Otherwise, the interruption-resumption may be interpreted negatively as additional evidence of the instability, and the nonperseverance of the individual.

A third explanation of the difference may be that interruptions only have a positive effect when they are accompanied by other information about the individual, in particular relevant labor force experiences. To put the matter differently, interruptions may show a positive effect for whites only because they are able simultaneously to accrue labor market experiences.

Because of the limited number of cases available in each of these categories of race, education and interrupted status, further empirical tests of these notions with this data set were not possible.

C. The Occupational Effects of Part-Time Education

We now turn to an examination of the effects of part-time labor force participation on occupational status ten years after entry into the labor market. Columns 4-10 of tables 30 and 31 contain the relevant parameters for this discussion. We first examine the coefficients contained in column 10 which give the effect of background and other factors on prestige of job held ten years after entry, but without any part-time education entry included. In comparing the results for blacks and whites, we find the usual pattern of lower R^2 value for blacks (30 percent vs. 42 percent). We also find distinct racial differences in the pattern of results. For black men, ability, educational attainment and prestige of first job are the significant predictors of occupational prestige ten years later. For white men, besides these factors (ability, educational attainment and prestige of first job) background factors (father's occupation) earlier labor market experiences (duration full-time and part-time labor market while still in school) and interrupted schooling pattern also are positively related to prestige of job held ten years later.

We now turn to an examination of the role of part-time educational factors, see columns 4-9 of tables 30 and 31. First, we note that the definition of part-time education is important. Duration of part-time education (column 7), enrollment in a vocational course either for credit (column 8) or not (column 9) do not significantly predict prestige growth for black or white men. Enrollment in a program that is degree oriented (column 6) or that results in a change in a degree status (column 4) does predict prestige growth for both black and white men. The global variable PTED (column 5) is also significant for both blacks and whites. The addition of these education measures increases the total R^2 by about two percent for each race.

For white men, the occupational benefits of changing educational status (EDJMP) and for being enrolled in any part-time program (PTED) are pretty similar. Being in a degree oriented program seems to be less important for occupational status change for white men. But for black men, a different pattern emerges. Being in a degree oriented program is much more likely to have the positive occupational payoffs. Several explanations might be offered for those different effects. Possibly employers view educational credentials offered by blacks and whites differently--to wit, the educational activities of the blacks are not considered seriously unless they are in recognized, i.e. degree oriented programs, whereas any education is reclaimable in occupational value by white men. Such an effect would require much greater depth of detail concerning the actions of employers than we have here.

Summary

This section has examined the occupational effects of discontinuities in educational attainments. To do this, we found it necessary to clarify the definition of the transition from education to work and the definition of continuing education, and then to modify the usual status attainment model to incorporate these definitions. The modified model then could be used to assess the impact of two types of education-occupation "inversions,"--interruptions in full time schooling prior to labor force entry and resumptions of schooling after entry into the labor market.

We found that the prestige of the job held ten years after entry into the labor market was positively influenced by interrupted schooling pattern for white men, but not for black men. We offered three explanations for these racial differences. First, we may still be witnessing an effect of educational level. Second, we may be witnessing an effect of different rates of credential accrual for blacks and whites once they return to school. Finally, the racial differences could come about because of the different amounts of labor force experiences accrued simultaneously with educational experiences for blacks and whites.

Concerning the effects of part time education, although both blacks and whites showed positive effects of educational resumption, there were racial differences according to type of participation. Black men were much better off occupationally from having participated in a degree oriented program, whereas for whites, participation in almost any kind of educational program had a benefit. In line with what we suggested concerning the racial differences in full time interruption effects, it seems that employers are willing to give the benefit of the doubt to white men but less so for black men. In the next section we explore some explanations of these racial differences in greater detail.

IV. Racial Differences in Returns to Schooling

Introduction

In the preceding sections of the paper, we have examined how the timing of educational activities may have consequences for occupational attainments. This examination was accomplished by working within the framework of traditional examinations of status attainment processes. In essence, we were concerned with examining the effect of incorporating a new variable into an existing and well worked model. What was at issue was not the model itself, but simply one part of it--the education to work transition.

However, in attempting to understand how the education to work transition actually operates, in particular how and why it operates differentially for blacks and whites, several issues, related more to the general efficacy of the model have surfaced. In this section of the report we examine some of these methodological and conceptual issues and their importance for different racial educational returns. We begin by briefly summarizing some related research on black-white educational payoff differences.

Previous Research

Attainment of educational credentials has long been seen as an efficacious route to occupational success. Slogans such as "stay in school, get a good job" reflect the popular belief in this "law" of status attainment. However, attainment of the same credential may not occupationally benefit all individuals alike, differences being particularly pronounced between the occupational benefits witnessed by blacks and whites. Blau and Duncan (1967) make the point clearly when they state "education, a path to upward mobility for all, is not as effective a route up for non-whites as it is for whites. Education does not produce the same benefit for Negroes as for whites, whether benefits are reckoned in terms of occupational achievement or mobility" (p. 210). Racial differences in returns to education both in terms of prestige and earnings have been documented. (Weiss and Williamson, 1972; Coleman, Berry and Blum, 1972; Coleman, Blum and Sorenson, 1971; Hause, 1972; Bowles, 1972). The magnitude of the racial gap obtained differs for these various studies, but roughly, it is claimed that the black payoff to education is roughly half that of the white. However, several criticisms of the present status attainment models may alter the magnitude of these racial differences. We discuss these methodological and conceptual criticisms in the next sections.

A. Methodological Issues

Two main methodological issues have been addressed which are important to the present discussion of racial differences in educational attainments. One centers around biases introduced when measurement error is not considered, another focuses on errors introduced when the functional form relating education and occupations is not correctly specified.

1. Measurement error

Most data bases have had insufficient data across time to examine the role of response error on estimates obtained in status attainment models. In addition, examinations which showed a fairly high reliability for measurement of educational and occupational attainments have been interpreted to mean that measurement error is therefore not problematic. However, unreliability alone cannot gauge the extent of the problem as unreliability may obviously affect other relationships in the model.

A careful consideration of the effect of measurement error on the estimates of the parameters of status attainment model was carried out by Bielby, Hauser and Featherman (1976). A discussion of all the findings of this interesting paper will not be attempted here; instead we focus on the results pertaining to differential returns to schooling.

Using the Occupational Changes in a generation II survey and a reinterview portion of that survey, they were able to estimate parameters of two models, one which reflected the structure of measurement error (a "corrected" model) and one which did not (a "naive" model). The variables used in the estimation included background variables (father's education, father's occupation and income), age, respondent's education, the prestige of respondent's first job after completion of schooling and respondent's present occupational prestige. In table 32, we provide the estimates obtained by these authors using the naive and corrected models. They estimated the parameters separately for blacks and whites and found that the black equation was considerably more sensitive to consideration of measurement error. The naive/corrected ratio for black men is .682 for first job while it is .855 for whites. Similarly the naive/corrected ratio for current job is .683 for blacks and .822 for whites. Bielby et al. point to the considerable exaggeration of black/white differences in the effects of education when measurement error is ignored; i.e. in most status attainment models. How-

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Table 32 About Here

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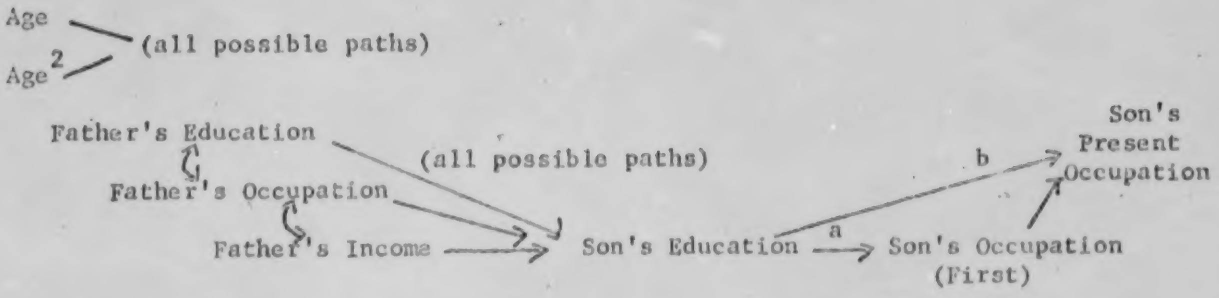
Table 32

Naive vs. Corrected Effects of Education on Occupation for Blacks and Whites, from Bielby, Hauser and Featherman (1976)

		Education to First Job[a]	Naive/corrected ratio	Education to Current Job[b]
Blacks	Naive	2.49	.682	2.84
	Corrected	3.65		3.97
Whites	Naive	4.76	.855	4.45
	Corrected	5.57		5.21
Black/white ratio				
	Naive	.523		.638
	Corrected	.655		.762


Age
Age^2
(all possible paths)
Father's Education
Father's Occupation
Father's Income
(all possible paths)
Son's Education
a
Son's Occupation (First)
b
Son's Present Occupation

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[a] Direct effect on son's first occupation

[b] Direct effect on son's present occupation

ever, it is fair to point out that incorporating measurement error by no means gets rid of the gap altogether. When measurement error is not considered, the black/white gap is .523 (2.49/7.76) for the first job and .638 for the current. In the corrected model, the payoff ratio becomes .655 for first job and .761 for current job.

Measurement error then is of some consequence in narrowing the gap, yet given the magnitude of the discrepancy after the correction (.655 and .761), measurement error clearly is not the only source of the discrepancy.

2. Education - Occupation Functional Form

Other methodological problems in addition to measurement error may be implicated in these differences. Specifically, we are interested in learning what effect the misspecification of the functional form linking education to occupation may have on the racial payoff differences. In virtually all the standard status attainment literature, education is viewed as having a linear effect on occupational prestige. This implies that a one year change in education anywhere in the education continuum will have a comparable effect. For example, using the linear specification implies that a one year change from the sixth to the seventh grade will have the same effect as a one year change from a junior in college to a senior in college. Moreover, the effect of earning a credential is not differentiated in this vi[illegible] from the effect of completing any other year.

It seems likely that educational rewards are not distributed in such a linear fashion. Instead we would imagine that there are greater occupational rewards for college attendance and for completion of a credential than there are for other years. In figure 5 we graph a hypothetical payoff scale as a function of years of schooling and credential earned.

Now, the question remains whether misspecification of the education-occupation linkage, i.e., using a linear form when a non-linear one is needed, could affect the finding that education is less efficacious for blacks than whites. We know that black men, on average, have lower educational attainments than do whites. Referring to figure 5 , this implies that black men are distributionally speaking situated on the part of the curve where the payoffs are less, if the non-linear form is appropriate. Then, whites may appear to have greater payoffs for their education simply because they are located on a different portion of the non-linear education-occupation curve.

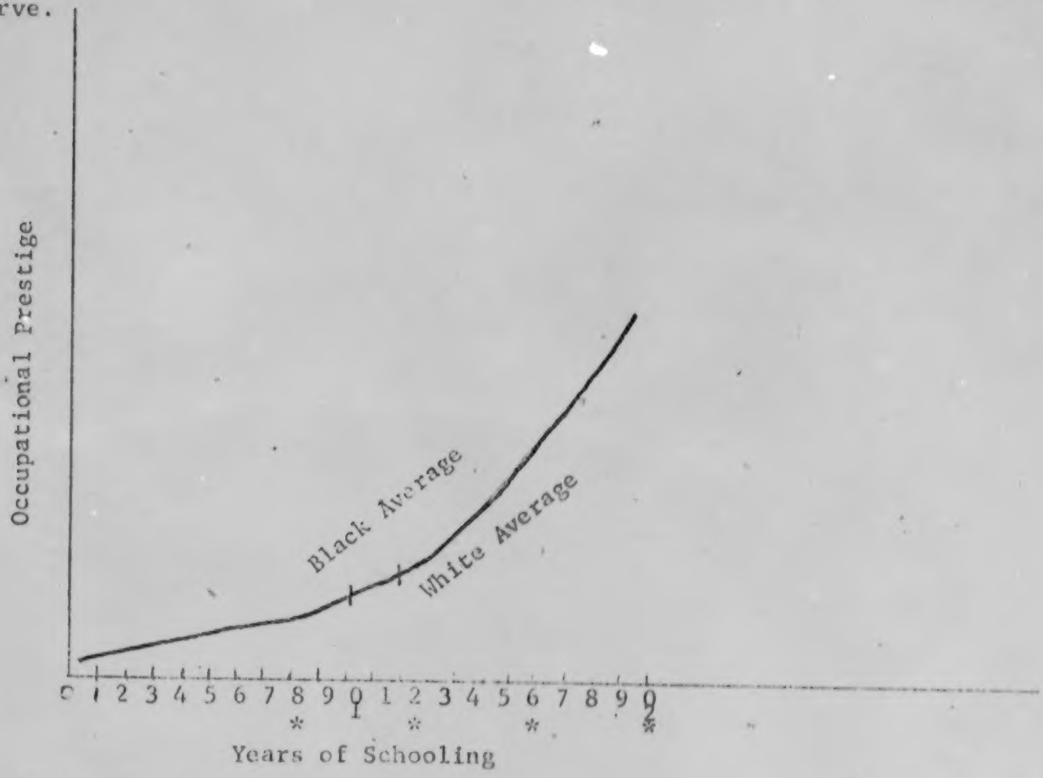

FIGURE 5: Hypothetical Education-Occupation Linkages

If distributional differences and non-linearities account for the observed racial gap, appropriate specification of the functional form may lessen the gap. To determine whether educational and occupational status are linked in a non-linear fashion, we divided education into 8 attainment categories which were entered as dummy variables in regressions, carried out separately by race. The categories used were:

		Years
1	less than grade school	(0-7)
2	grade school graduate	(8)
3	some high school	(9-11)
4	high school graduate	(12)
5	some vocational	(12+)
6	some college	(13-15)
7	college graduate	(16)
8	post graduate school	(17-20)*

We controlled for family background and ability in these runs and used prestige of job held at age 30 as the dependent variable. In entering the dummy variables, we did not include the less than grade school category, so the coefficients for each succeeding dummy variable can be seen as the increment in prestige attributable to that educational increment. In figure 6 we have graphed these changes in prestige for blacks and whites. The notes to the figure also provide the actual increments used in the plot.

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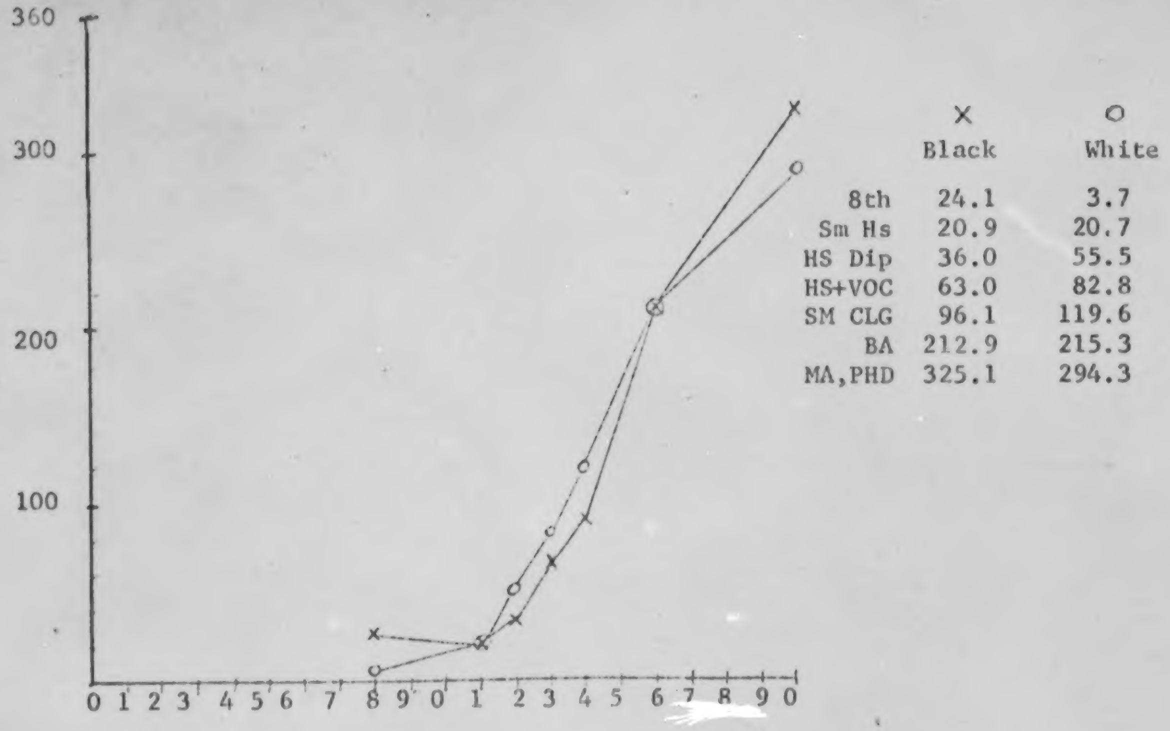
* It is true that the above scale itself is not an interval one, i.e., the distance between categories is not the same. In our discussion, we will convert back to the metric of years of schooling to see if the non-linearity persists.



	X Black	O White
8th	24.1	3.7
Sm Hs	20.9	20.7
HS Dip	36.0	55.5
HS+VOC	63.0	82.8
SM CLG	96.1	119.6
BA	212.9	215.3
MA,PHD	325.1	294.3

Figure 6.

Prestige Increments by Educational Attainment for Blacks and Whites

creases in education level are not uniform across the different levels, being much steeper at the upper levels. For example, earning a college degree increments one's prestige by around 300 points, whereas obtaining a high school diploma results in an increment of about seventy points. So, one year of college adds about the same amount as did going through the previous twelve years. Obviously then this is a case of non-linear effects.

Now related to the issue of black-white differences in returns to education, Figure 6 suggests the following interpretation. For attainment levels "some high school," "high school diploma," and "high school with votional training," black men have lower occupational status gains than do whites.* This finding is certainly consistent with the view that occupational returns to education are lower for blacks than whites. We do note that for black men who attain a college degree the increase is comparable to the white increase and for those who go on beyond college the increment is actually greater for blacks than it is for whites. However, we should recall that these figures are relative to the starting point of less than an elementary education and that for all educational attainment levels black men have lower occupational statuses. To see this, refer to Figure 7, which

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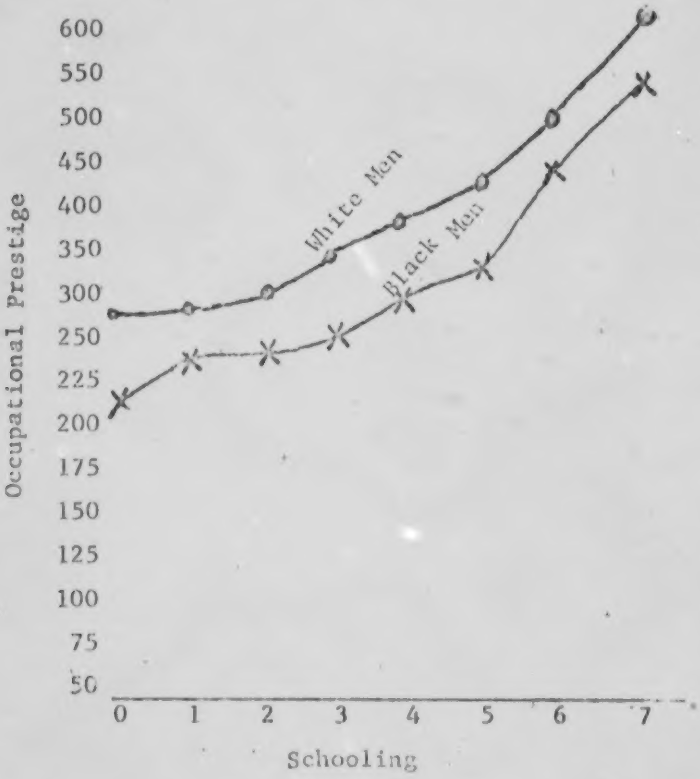
* See Christopher Jencks, Who Gets Ahead, for a similar finding and interpretation. I am grateful to Jim Crouse for pointing this out to me.



		X Black Men	○ White Men	Difference
0	Less than 8th	211.5	271.5	60.0
1	8th Grade	235.6	275.2	39.6
2	Some High School	232.4	292.2	59.8
3	H S Diploma	247.5	327.	79.5
4	HS then VOC	275.5	354.3	73.8
5	Some College	307.7	391.1	83.4
6	B.A.	425.5	486.8	63.6
7	Post Graduate	536.7	565.8	29.1

Figure 7.

Occupational Prestige as a Function of Schooling for Black and White Men provides a plot of the average prestige of the occupation held at age 30 by these same attainment levels, separately for blacks and whites. From figure 9 it seems likely that a quadratic form (i.e., $x + x^2$) would fit the data fairly well. Our comparison of the fit of the data will be by examination of the R^2 values for the case when the dummy variables are used and when a quadratic form is fitted. For the white men, the R^2 for the equation with the dummy variables (full regression) was .405, the R^2 for the equation with $x + x^2$ was .404. Similarly for blacks, the full regression R^2 was .314 as contrasted with .311. The details of these regressions are supplied in Tables 33 and 34. From the closeness of these results it seems clear that the quadratic form adequately captures the non-linearities.

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Tables 33 and 34 About Here

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We wish to determine now if the coefficients for educational attainment and its square are significantly different for blacks and whites. To do this, we form new variables representing the race x educational attainment interaction and the interaction for race x educational attainment squared and then regress occupational attainment for blacks and whites on these measures. The results are supplied in Table 35.

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Table 35 About Here

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From table 35, we see that both interaction terms are significant, implying that the curves for blacks and whites do indeed differ.

What do we conclude from these various excursions into the functional form of the education-occupation linkages? First, we have demonstrated

Table 33

Regression of Prestige at Age 30 on Background Factors and Educational Attainment Specified as a Linear and Quadratic Form

	Black Men Quadratic		Black Men Linear		White Men Quadratic		White Men Linear	
Region	-3.83	(-.014)	-.616	(-.002)	-1.08	(-.003)	-5.59	(-.017)
FaEd	8.68	(.118)*	7.14	(.097)*	-1.59	(-.018)	-2.25	(-.025)
MaEd	1.38	(.018)	-.164	(-.002)	.103	(.001)	-1.95	(-.021)
FaOcc	-.00	(-.002)	.021	(.023)	.089	(.079)*	.088	(.077)*
Ability	7.74	(.139)*	7.32	(.131)*	6.26	(.092)*	5.26	(.077)*
EdAtt	-11.02	(-1.69)*	24.90	(.381)*	3.98	(.057)	38.38	(.553)*
$EdAtt^2$	5.73	(.586)*			3.92	(.497)*		
R^2	.311		.259		.404		.381	
ΔR^2		.052					.023	
$F_{quad,linear}$		59.2	$p<.001$				32.5	$p<.001$

Table 34

Regression of Prestige of Job Held at Age 30 on Background Factors, Educational Attainment as Specified by Dummy Variables

	Black Men (n=737)		White Men (n=851)	
Region	2.34	(.009)	-2.42	(-.007)
FaEd	7.98	(.108)	-1.40	(-.016)
MaEd	1.46	(.019)	-1.14	(-.012)
FaOcc	.011	(.012)	.078	(.069)
Ability	4.07	(.077)	3.57	(-.057)
8th Dip	24.07	(.052)	3.70	(.007)
Some HS	20.86	(.083)	20.65	(.049)
HS Dip	35.95	(.128)	55.51	(.170)
HS-Voc	63.91	(.155)	82.80	(.196)
Sm Clg	96.15	(.216)	119.58	(.258)
BA	212.89	(.405)	215.32	(.495)
POSTGRD	325.11	(.281)	294.29	(.533)
R^2	.314		.405	

Table 35

Regression of Prestige of Job Held at Age 30 on Background Factors and Educational Attainments Expressed as a Quadratic, and Race X Education Interactions

	Raw	STD
Race	21.17	.048*
Region	2.11	.007
FaEd	-1.32	-.015
MaEd	-1.43	-.015
FaOcc	.095	.085*
Ability	8.56	.127*
EdAtt	67.68	.972*
EdAtt^2	-.819	-.100
Race x Ed	-66.11	-.941*
Race x Ed^2	4.80	.602*

that a linear specification of the education-occupation relationship is inadequate (see Table 32). The potential bias introduced by misspecifying the relationship linearly is potentially larger for blacks than it is for whites. When the $x + x^2$ form was utilized for blacks the R^2 change was about five percent; for whites it was around two percent.

Consideration of the nonlinear nature, however, does not appear to alter the view that payoffs for blacks are lower than those for whites. In estimating the returns to education for blacks, controlling for region, ability, parental education and occupation, the weight obtained for blacks was about 65 percent that of whites. Using the $x + x^2$ specification which allows for the disproportionate increases due to higher education, we would expect the racial gap to be even larger because of the lower level of attainment for black men. We compared the increments to prestige using the average educational attainment for each group and found the black/white ratio to be .38.

Thus the unaccounted nonlinearities would seem to widen the racial gap. However, the fact that we are unable to consider the important consequences of measurement error makes these results contingent.

B. Conceptual issues

Most often, the observed racial discrepancy is seen as evidence of discrimination and little discussion is made after that statement. Clearly, quite a strong view of the inequities of the social system is required to claim that all the racial disparities in returns to education are attributable to discriminatory practices. Other explanations may be salient, but are not typically explored. For example, the quality of the schooling experiences may be so different for blacks and whites that the same quantity of schooling may index quite different cognitive skills. Consequently, whether one calls the lower payoffs evidence of job discrimination or evidence of unequal credentials is a debateable issue. What is required, then, is the generation of some testable assertions concerning the mechanisms of discriminatory practices, which can then be empirically examined.

Lacking direct information on whether employers do actually discount educational attainments for blacks because of the supposedly inferior academic standards, we can nonetheless make some indirect examinations of this assertion. One way that employers may indicate their uncertainty over the meaning of a credential held by a black person is by their seeking "extra" information that the education attained does in fact have comparable meaning to that attained by whites. That is, additional knowledge about skills and attributes may be required for the employer to not discount the educational attainment. One likely source of this type of information is the previous labor market experience of the individual. For blacks, labor market experience may be a particularly valuable asset if employers are indeed skeptical about the meaning of their educational credential. The same credential may be valued more or less depending upon the existence or non-existence of labor force experiences. In other words, apparent racial differences in educational payoffs may be reduced by simultaneously considering the effect of labor market experiences.

To examine the effect that introducing labor market experineces has on the estimate of the effect of education, we carried out several regressions separately for blacks and whites to cover the first decade of labor force experience. In Table 36, we present the coefficients for educational returns

Table 36 About Here

Table 36

Estimates of Education and Experience Returns for Black and White Men in the First Decade of Labor Force Participation

	ELF		ELF + 2		ELF + 4		ELF + 6		ELF + 8		ELF + 10	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black
Education	38.91 (.50)	17.43 (.29)	42.90 (.55)	22.68 (.36)	46.04 (.54)	21.19 (.36)	40.64 (.53)	27.65 (.42)	42.16 (.56)	30.44 (.44)	39.44 (.52)	28.77 (.43)
B/W ratio	.44		.53		.46		.68		.72		.73	
Education	39.77 (.51)	17.49 (.29)	41.25 (.52)	22.96 (.39)	42.74 (.52)	21.73 (.36)	38.56 (.50)	28.04 (.42)	41.10 (.54)	30.83 (.45)	37.79 (.50)	29.08 (.43)
Experience	-.51 (-.05)	.20 (.03)	.36 (.06)	.47 (.10)	.71 (.11)	.71 (.16)	.44 (.08)	.44 (.10)	.17 (.04)	.42 (.10)	.28 (.06)	.39 (.10)
B/W ratio	.44		.56		.51		.73		.75		.77	

in two different models, one with labor force experience included and one without it in the equation. These estimates were obtained for the prestige of the job held at entry, at entry plus two, four, six, eight and ten years. We included a range of years to determine if the pattern of results were stable across the first decade of labor force participation. We also computed the black/white ratio of returns to education for each equation.

Inspection of table 36 suggest two conclusions. One, the black/white ratio increases over time, i.e. the discrepancy in payoffs is greatest at entry and diminshes over the ten year period. This pattern suggests that the entry to the labor market is particularly critical for black/white achievement differences. Second, inclusion of labor force experiences, operationalized as months of labor force activity from age 14 until the date being considered does alter the ratio of returns to education in the anticipated manner. In all cases, the black/white ratio of returns is higher when experience is simultaneously considered. Moreover, the coefficient for experience is positively and significantly related to prestige for blacks and exceeds that obtained for whites in all instances. Thus, labor market experiences are relatively more important in explaining prestige for blacks than whites although education is more efficacious for whites than blacks. We interprete this finding that extra direct information about employability is necessary for blacks and that labor market experience is one such source of supplemental information.

Summary

The finding that returns to education are lower for black men than white men grows out of the use of a status attainment model whose specification may contribute to the magnitude of the observed discrepancy. In particular, the usual formulation of the status attainment model does not attend to the effect of measurement error or to the possibility that education and occupation are linked in a non-linear fashion. This section of the report discussed the extent to which the observed racial gap in educational returns was lessenned by attending to measurement error and non-linearities. Although these factors were implicated in determining the magnitude of the racial gap, consideration of these elements by no means eradicated the disparity. One is left with the conclusion that these details are important to bear in mind when assessing black/white differences in education returns, but that they do not constitute an explanation for the observed racial differences.

Finally, this section of the report discussed at least one conceptual issue which has been ignored, or which has been treated poorly in the literature - the role of labor market experience as a supplementary indicator of employability for black men. Labor market experience may be a more direct indication of the employment potential of black men simply because there may be sufficient uncertainty over what a specific educational level actually represents for these individuals. Labor market experience, then, may provide a form of sponsorship for blacks which educational attainment does for whites.

Appendix A

Appendix A

Methodology of the Life History Survey

In this appendix we discuss the sampling and screening procedures, the field procedures, the interview instrument, and the special data processing programs which were devised to handle the data. The write-up for the usage of the retrieval program, LIFE.FOR, examples, and a listing of the program are included.

A.1 Sample Design

The target universe in the Life History study was the total population of males 30-39 years of age residing in households in the United States (henceforth designated as eligible males). Individuals in the sample were selected by standard multi-stage area probability methods.

The analytical design required approximately equal numbers of Black and White eligible males. Hence the selection consisted of two parts: (1) Sample A, designed to yield the required number of White eligibles plus a number of eligible Negroes proportional to their representation in the population as a whole; and (2) Sample B, a supplementary selection of Negro households only, designed to supply the additional eligible Blacks required to satisfy the analytical design.

Sample A was based upon the NORC 1962 Master Sample, a self-weighting selection of U.S. households in which sampling units at successive stages individual in a household is 0.0002011. Therefore, the selection rate for Whites is 0.0002011. In Sample B, the selection probability is 0.001134.

Note, however, that Blacks had two opportunities to be selected--either in Sample A or in Sample B (or in both, although the probability of falling in twice is so small as to be negligible). Hence the selection rate for Blacks is 0.0002011 + 0.001134 - (negligible amount) = 0.0013351.

Observe that the selection rate for Blacks is 6.639 times that for Whites. As a check, one can take the number of White eligibles, 1,150, and the number of Black eligibles, 916, and compute

$$(1{,}150 \times 6.639)/916 = 8.33$$

which is almost exactly equal to the ratio of Whites to Blacks in the 30-39 age stratum of household dwellers (CPS, 1 January 1969).

A.2 Sample Selection

Within each PSU, households were selected in which a member of the household was male and between the ages of 30-39. A dwelling unit was visited up to four times in an attempt to screen for eligible respondents and obtain interviews. For both Samples A and B about 90 percent of the eligible respondents were interviewed. For white men by far the most important reason for not being included was refusal to participate after being contacted (73.5%). For black men, although final refusal was an important reason (40.2%), just not being able to locate the respondants at home was also a difficulty (35.4%). Thus, there are differences in the reasons before the final stage are selected with probabilities proportional to their estimated 1965 populations. The primary sampling units (PSU's) consist of 72 standard metropolitan statistical areas (SMSA's) and rural counties selected from strata based upon classification by geographic region, size of largest town, median family income, economic characteristics and, in the South, race. Additional details of selection procedures within PSU's, involving the selection of localities, tracts, enumeration districts, city blocks, and in some cases directory sampling are provided in Volunteers for Learning by Johnstone and Rivera (1965).

Sample B was designed to obtain the additional black eligibles without the massive screening of households that would be necessary in a national sample wtih selection proportional to overall population size. In order to minimize the cost of setting up new field staffs, the same PSU's were employed in Sample B as in Sample A, with the addition of two PSU's in the South aimed at reducing the excessive clustering of eligible Negroes in rural areas. After the primary stage, however, the selection of sampling units was made with probabilities proportional to the estimated Negro population instead of the total population. At the final stage, segments of households were selected with equal probabilities and screened for black eligibles who were interviewed upon identification. The end result of this procedure was a self-weighting sample of black eligibles only, with the variation in cluster size kept within efficient bounds by the use of probabilities proportional to Negro population size.

In Sample A, the overall probability of selection of an eligible why black men and white men who were eligible for selection were not in the final sample. However, it is impossible to know how the characteristics of those who were not in the sample differ according to reason for non-inclusion.

The difficulty in obtaining an interview from certain respondents should be appreciated. In particular, respondents who were overly suspicious of surveys and were afraid of being interviewed presented special problems. Other problems arose due to inassessibility of the residence or resident. Some edited transcripts of phone conversations between field personnel and NORC staff are informative.

CASE 1. Interviewer was unable to find R at home. After several attempts R's wife said she might find him at the local grocery store. She went to the store and located R and told him what she wanted. He said okay, but first he had to go back into the store to tell his brother something. He did, and that's the last she saw of him.

CASE 2. Interviewer had great difficulty in getting to the dwelling unit because of the lack of roads; the only road being dirt, which, due to spring rains, was knee deep in mud in places.

CASE 3. Despite extraordinary efforts, we'll probably have a very low completion in St. Louis. Interviewer specifically cited one segment in Alton, Illinois, where she did the screening. Low income area, taverns on each of the four main corners in the area, groups of men drinking from bottles in front of each bar. She screened, and located three eligible respondents...made three calls, never located them at home. Was told by one wife that her husband rarely came home. On her fourth visit to the segment, two men entered her car, wanted to know what she was doing there. They turned out to be leaders of the Black militant group in that community. After some conversation, (she said she played it very cool), one left. Extended conversation with the other, exchanged names, and he offered to help if she had further difficulties. The following Saturday, she met him again (he was working with a group of teen agers cleaning up the streets) and said that she'd had no luck with any of the three Rs. He offered to try to find them and arrange appointments. She accepted, though with some reservations...he was drinking gin from his hip pocket at 11 a.m. that day...he also told her that he'd recently been released from prison (armed robbery). She is to call him next week to see whether he has been able to locate Rs, and set appointments.

I suggested that she should exercise some care that any appointments be in relatively public places...she will call when she's talked to him.

It would appear from similar episodes that the staff was particularly diligent in searching out hard to find respondents, a fact to be kept in mind in our later comparisons with other data sources.

A.3 Interview Instrument, Instructions and Field Work

The Instrument

Designing an instrument to collect life histories by an interview presented an interesting challenge. Although great detail about life circumstances was desired, a concise format had to be devised to insure that the interview could be managed in a reasonable length of time. Additionally, the format had to be flexible enough so that the respondent could recount life events by whatever time frame (e.g. his age, calendar year, two years after marriage) was convenient for him. This flexibility also meant that checks on the consistency of dates could be carried out as part of the interview itself.

Experimentation with a number of formats led to the development of the instrument displayed in Figure A.1. The instrument is only nine pages long, but in these nine pages the occurrence and date (year and month) of major events in thirteen areas of the men's lives were recorded. (These thirteen areas are detailed in Table A.1) Examining the first page of the instrument, which is filled in for a fictitious respondent, we see that the format essentially is a matrix with the columns comprising the variables (e.g. full-time education, full-time employment) and the rows corresponding to time. Because we wanted the respondents to be able to recall events by age or by calendar year, some way to quickly and accurately match age and year was required. We provided a self-adhesive "age strip" which had ages 14, 15. . . 39 which the interviewer affixed next to the appropriate year, according to the age of the respondent. This method was a convenient and efficient means of matching up ages and years.

The shortest period of time in eliciting information for various aspects of the men's lives was a month. The calendar month in which an event occurred was recorded; for example in Figure A.1 we see that R obtained his B.A. in June of 1955. Using the month as the unit of time departs from other research utilizing life histories (Balan, 1969) but this shorter period of time (as opposed to a year) seemed preferable from several points of view. Recording the month and year of occurrence of an event was crucial for any analysis concerned with the sequencing and timing of life events. Recording the month of the event was also important for accuracy of reporting changes which occur within variables such as seasonal occupations. In short, there were several analytical purposes which were best served by having the month as the smallest unit of analysis. This consideration was a primary concern, and difficulty, in design of the format of the interview and in the computer processing of the life histories.

In addition to the life history information, several characteristics of the Respondent's family in which he grew up were collected. Because these variables (e.g., father's education, mother's education, number of brothers and sisters) were considered to be the same from age 14 until the time of the interview, they each have only one value for each Respondent. Since they do not vary with time they are termed here "static" variables. (See items 14-22, 24 in Figure A.1.)

Field Work

The field work was carried out by the National Opinion Research Center (NORC) University of Chicago. Both black and white interviewers were assigned to the survey and whenever possible the race of the respondent and the race of the interviewer were matched. Interviewers were trained by a two stage process.

First, supervisors from each Primary Sampling Unit (PSU) were trained either via long-distance conference calls or in person by the NORC staff. Supervisors in turn trained interviewers in their PSU's, and, in addition Project staff members conducted a number of training sessions in the field.

Each interviewer was provided with questionnaire specifications prepared under the direction of the Project staff and modified by NORC. These specifications contained precise explanations and definitions for all the information to be collected and suggested appropriate probes to be used in the field. In general, interviewers were encouraged to collect the information pertaining to a specific life area in temporal sequence (either forward in time as in the case of education, or backwards as in the case of marital status by starting with present status). However, the format does allow for alternative methods of obtaining the information. For example, a respondent may report his occupation at a given point in time and relate other information to it--where he was living, with whom he was living, etc.

Recording information across rows, starting with a column in the center of the questionnaire (e.g., family history) or using other alternatives in interviewing was not discouraged. Reports from interviewers indicate that variation in the interview situation did, in fact, exist. For example, our qualitative impression is that higher status respondents had no difficulty in reconstructing a consecutive job history without reference to family or residential histories. On the other hand, many lower status respondents continuously linked job information to significant family events, major geographical moves, etc.

Our instructions also encouraged the participation of the wife whenever possible. We thought that her recall could be an asset in getting facts and sequence of events in proper order. In addition, the wife would have more complete information about the parts of the interview which concern her own history and the family history since the time of her marriage. Our experience also indicates that the rapport between interviewer and respondent was better when the wife was not excluded.

Each interviewer was required to complete one "live" interview prior to beginning her assignment. This interview was carefully reviewed by supervisors and, where necessary, additional training was provided. These "practice" interviews were also useful to the project staff both as a "zero hour" check on the specifications and instructions before the study actually began, and in the development of coding procedures and the testing of computer programs.

In addition to the training, a "field edit" was instituted to insure quality. This consisted of a complete review of the first few interviews returned by each interviewer and a partial review of the remaining questionnaires from each interviewer's assignment. In the case that a field edit showed incomplete or inconsistent responses, the questionnaire was returned to the interviewer for further clarification by the respondent. Phone validation was conducted on 5% of the cases. In some instances, minor items of information which had been detected as missing during the field edit were solicited from the respondent during the validation call.

The average time taken to complete the interview was 70 minutes. Some appreciable variation occurred around this average as many individuals simply have more "eventful" lives than others.

2.4 Costs

In describing a project, the costs involved are rarely set out in black and white for the inspection of the reader. In part, this lack of discussion may simply reflect a paucity of data on the actual cost incurred. In this project we face a similar lack of complete cost data. For example, it would be impossible to reconstruct how much it cost to transcribe the life histories into a usable computer file because data were not kept on that phase.

However, we do have detailed data on the cost of locating and interviewing this sample of men which will be presented. The foremost reason for discussing cost is to provide some benchmark (albeit a circa 1970 one) for comparison of retrospective interviews vs. other designs, such as longitudinal ones.

On the average, each interview cost about $45 to complete. The costs for the black and white men were comparable with the exception that for some small portion of the black sample (35 cases) the costs were exceptionally high ($70 each). These cases presumably reflect situations as described in case 2 and case 3.

A.5 Data Processing of Life Histories

Storage of Life Histories

Several characteristics of life histories as data differentiate them from the data usually encountered in social science research.

First, life history data has a time dimension associated with it. That is, the information collected on any variable includes both substantive content and a time value. Second, life history data involves repeated measurements on the same individuals at different time points. Thus, it is different from data which also contains a time dimension, but which presents successive measures on different samples of individuals. Third, life history data differs from panel data or "before-after" data which records data for the same individual but at specific and the same points in time only. The life history data on one person (case), as the term is used here, consists of information on several variables. For each of these variables, over the life of the person, a continuous record is collected showing its value at each point in time. The number of entries per variable and the length of time between changes of value is itself variable among different individuals in life history data.[1]

The richness of this type of data is its most distinguishing but also most troublesome feature. Since the number of entries per variable may differ for each respondent, the resulting data file consists of variable length records containing data on a differing number of variables. Standard social science computing packages can not easily handle a data file structured in this manner. Most of the usual packages (SPSS, BMD) expect as input a rectangular array where the columns represent a fixed number of variables and the rows are the individuals.

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[1] These characteristics of the data are not entirely unique to life histories. Data on the usage of time (Szalai, 1972), for example of of classroom observations, have a similiar structure.

Consequently, researchers dealing with life history data have had to design their own specific programs to process it. A discussion of some techniques employed thus far will be useful to those beginning new studies which will use life history data. Also it is hoped that the suggestions given in the later part of the paper for a software package to store and retrieve life history data will help in establishing some commonality between the various data bases and retrieval methods.

Three approaches have been used in storing life history data bases. One method we will call the "direct" method, another the "indexed" or "indirect method" and the third the "event" method of storage. As examples, we will use the Monterrey study (direct method) the Retrospective Life History Study (indirect method) and the Oslo study (event method).

The Monterrey approach constructed a fixed format date and event matrix for each respondent. In other words, it used the conventional, direct method, which is easily programmed in FORTRAN and similar languages. Thus, the same amount of data was stored for each individual regardless of how many entries were actually present for a variable. Figure 1 presents a hypothetical fixed format date and event matrix for two variables (occupation and education) over a time period of 18 yrs. The occupation variable had five different entries. Entry one occurred between year 1 and year 3, entry two between year 4 and year 5, entry three between year 6 and year 10, entry four between year 11 and year 13 and entry five between year 14 and year 18. The three different entries for education took place between year 1-year 5, year 6-year 9 and year 10-year 18. Note that a respondent, having only one entry for each of these variables would need the same storage space as a respondent having a different entry each year. The amount of storage required is the same for each respondent regardless of how "full" or "sparse" the content of the matrix actually is.

Insert Figure A.2 Here

Such a fixed format matrix is uneconomical in terms of computer storage space, but it offers the advantage of direct retrieval of any entry simply by specification of the row and column of the matrix. Since the Monterrey Study researchers collected data in intervals of a year for ages 1-60 for 16 variables, the resulting matrix (40 X 16) was still within the storage capacity of large scale computers. Note that in any of their analyses, the smallest unit of time must be the year. This restriction could be fatal if they were interested in learning about the precise sequencing of events. For example, if two events occurred in the same year (e.g., a marriage and change of residence), it would not be possible to determine which occurred first. One way around this problem is to record information for a different unit of time, for example a day or month. Yet, if the small unit of time were used, the construction of the date and event matrix would require a matrix beyond the storage capacity of most large computers.

This entire difficulty may be avoided by storing the date and event information, not as a fixed matrix, but as a variable length list where only the changes in data are recorded. This approach was used in the Retrospective Life History Study at The Johns Hopkins University. The dummy entries used to "pad out" the matrix are not needed, and so each individual will have recorded only the actual information needed for him. With this approach, the unit of time may become as small as the memory of the respondent (and not the computer memory) will permit. The resulting amount of data is within the limits of current small scale computers.

To locate data in this list, a directory or index must be constructed for each individual's record. Thus, each record (case) will contain an index for a data portion. The index portion provides: (1) the number of entries for each variable (i.e., the number of events or states recorded for this variable); (2) the number of items recorded for the variable (the data for each variable may consist of several distinct items, e.g. the occupation variable described below contains the following data: the beginning and ending dates of the job, the wages, the prestige of the occupation, and the reason for leaving the job. Although the number of items recorded for a variable is the same for each respondent in this example this approach could easily be adapted to handle the storage of a different number of items/event and, (3) the beginning location of the variable in the data portion. The data portion provides: (1) the date of this event of the variable, and (2) the actual data for this variable. As an example, hypothetical index and data portions are given in Figure A.3 for two variables--occupation and education.

This hypothetical respondent had five events recorded for the occupation variable, each event had four items, and the beginning location of this variable in the data portion was location 1. For education, the first of the three events would be located in data positions 21-25 and each event or entry would take up 5 positions (item count). As an example of how the index would be used to locate the desired data, we will retrieve the last occupation entry for this hypothetical respondent. The computer program must first consult the index to find the number of entries for the occupation variable (5), multiply this number by the item count (4) and adjust the location accordingly (locations 16-20).

Insert Figure A.3 Here

If the Life History sample had been converted to a fixed format matrix, as in the Monterrey study, the resulting matrix would have been beyond the storage capacity of computing equipment available to us (and to most computing centers). Recall that the unit of time used in this study was the month and that the maximum "life span" for recording data was 481 mo (1969 [date of interview]-1929 [eldest respondents birth date]). One would need a matrix large enough for the extreme case, i.e., a respondent having the maximum number of entries on all variables. Thus, for each respondent, the required matrix size would be 481 X 3557.[1]

However, as the disparity between the maximum number of entries and the average number of entries/variables suggests (See Table A.2) the actual proportion of usable data (as opposed to padding data) is small.

Insert Table A.3 Here

Table A.3 shows for the Hopkins data the actual number of words needed to store all usable entries, all variables. On the average, 577 words are needed for a respondent's record. The actual total number of words used for the data for all respondents was 917,898. If these same data had been expanded to a fixed format date and event matrix the total number of words needed would have been in excess of 2.7 billion.[2] The proportion of usable data in this matrix is about .003.[3]

Another approach to storing life history data was utilized by Ramsoy in her studies of occupational mobility among Norwegian men. (Ramsoy and Clausen, 1977). The structure of the data--variable number of entries per person--is similar to the structure of the Hopkins and the Texas data sets. The approach used in the Norwegian study entailed creating an event file for each of the major life areas. Thus there would be a file with all data on all respondents pertaining to marriage, another file pertaining to occupational history, another for education and so on. There is not a single record then which contains all data for a respondent. A respondent's life history would have to be reconstructed by consulting the appropriate portions of each event file. Like the indirect method used in the Retrospective Life History study, this method has the decided advantage of economies of computer storage. This method is also much easier to implement and for some types of analyses--such as within variable change analyses--decidely more economical than the indirect or direct storage techniques.

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[1] The 3557 is gotten by multiplying the number of items by the maximum number of entries/variable and summing across all variables.

[2] Each individual requires 481 X 3557 or 1.7 million words. The total sample required 1.7 million X 1589 cases, approximately 2.7 billion words.

[3] This figure was calculated by dividing the actual amount of data (917,898 words) by the actual and padding amount of data (2.7 billion words).

On balance, the relative efficiency of storage by event or storage by person will depend upon the mix of analyses required. If the major unit of analysis is a variable, then storage by that means is probably most efficient. On the other hand, if analyses are concerned with events in various life spheres, then reconstructing a life history from the separate event spheres is likely to be a costly way to proceed.

Retrieval of Life Histories

In the previous section, we have described three ways of storing life history data: direct, indirect and event storage modes. Each of these storage modes will still typically require additional reformatting or manipulation prior to actual analyses of the data. In the case of the direct storage method (the Monterrey study example), one can easily obtain the value of any item at any time point by simply referencing the appropriate row and column of the matrix. But, if one is interested in obtaining the value of one variable conditional upon the value of another variable, then additional rearrangement of the data are required. Such "contingent" type requests seem like one likely type of data required in the analyses of life histories. The general point is that regardless of the storage method used, some additional reformatting of the data is likely for analytical purposes. The computer program which creates a data file with the data classified as required is called the retrieval program. The analyses which are planned will largely determine the characteristics of the retrieval program. Some general characteristics of retrieval programs will be mentioned in the next section.

The Ability to Restructure the Data File for Differing Units of Analysis

A decision about storing the data by events or by persons will probably be made on the basis of the relative frequency of different types of analyses. Simply put, if the basic analytical plan is to look at changes within a variable, such as changes in occupational histories, storing the data by events would seem to be most efficient. Alternatively, if one is primarily interested in the individual as the unit of analysis, storing the data in this corresponding method seems reasonable. However, regardless of the choice of method of storage it is likely that at some point in the analysis of the data a different analytical unit will be desired than the one used in storing the data. So, in the case of the Oslo study, it is necessary for the retrieval program to be able to reconstruct the individual's life history from the separate event files; similarly in the Hopkins study it is necessary for the retrieval program to create separate event files from the life histories.

Insert Figure A.4 Here

The ability to retrieve a variable contingent on another variable. One of the most powerful features of this retrieval program is its ability to return the value of a variable contingent upon the occurrence of another event or at a particular point.

For example, this type of retrieval is imperative for analyses dealing with the sequencing of events in a life history file.

The following list of examples illustrates this type of contingent retrieval:

a) occupation held in Jan. 1960
b) occupation held at age 20
c) occupation held at date of marriage
d) occupation held 1 yr. after first divorce
e) occupation held 1 yr. before second marriage
f) second occupation held after discharge from military service
g) age at date of marriage
h) age at first job after leaving military
i) date of discharge from military service
j) duration of first job after leaving military service
k) age at which occupational prestige was the highest
l) age at which occupational prestige was the lowest.

The above examples retrieve data contingent upon conditions within the individual record (inter-record retrieval). An additional powerful feature is that it permits specification of the retrieval conditions in terms of some aggregate statistic computed for either the entire sample or some subsample. Figure A.5 lists the general capabilities of an. inter-record retrieval feature. Two examples are given below to illustrate the inter-record retrieval.

a. Retrieve occupation held when earning within 500 dollars of the average wages of the sample.

b. Retrieve last age at which the respondent was earning less than the average wages of blacks in the sample.

The ability to accumulate the frequency of events or duration of state between two given time points. Another general feature of the retrieval program is its ability to perform cumulative retrieval between two specified points in time. These time points may be age, time, the occurrence of a particular event, or attainment of maximum or minimum value of a variable. In Figure A.6, these general features are shown. As examples we might retrieve the following data:

a. Retrieve cumulative duration out of full-time education from the time the respondent dropped out of school until he received his high school diploma.

b. Retrieve the number of times the respondent was unemployed from the time he received his high school diploma until age 30.

The next chapter provided documentation for the life history retrieval program LIFE.FOR as well as a listing of the program.

Individual As Unit of Analysis

When the individual respondent is the unit to be analyzed, four types of retrieval requests, over all variables may be made. Referring to Figure A.7 these retrieval types are presented in boxes 6-9.

1. Single Event (6)
    a. Retrieval of specific entry for a particular dynamic variable. For example, retrieve the prestige of the last job.
    b. Retrieval of entry at particular age of calendar time. As as example, one could request the program to retrieve the education attained at age 21 or in 1968.
    c. Retrieval of entry when particular event of another variable occurred (contingent retrieval). For example, retrieve the occupation code of job held when the first child was born.
2. Static Information (7)
    a. Retrieve particular word in static information. There are 73 words; see documentation in part 2, pp. 1-15.
3. Cumulative Retrieval (8) (9)
    a. Retrieval of the number of times a particular word of a variable equalled a specific value from time or event point 2, (8). By a time point, we mean age or calendar time; an event point specifies the occurrence of a particular event such as date of birth of second child or date of divorce.

b. Retrieval of the duration of a particular event between two time or event points. (9) Here the retrieval program would accumulate the number of months that a word of a variable had the requested value between two specified points in time. For example, the duration of unemployment between age 14 and age 30 could be obtained with this option.

A.6 Usage of the Retrieval Program

Introduction

This section provides examples and explanations for usage of the Life History Sample Retrieval Program, LIFE.FOR. This program is written in Fortran-IV and has been tested using a DEC-10 computer. Modifications of this program have to be made before it can run on an IBM 370; listing of the necessary changes can be obtained from Center for Social Organization of Schools, The Johns Hopkins Unveristy. The program listed and discussed here is operable on the DEC-10.

Several terms which are used throughout to describe the data tape and the retrieval program are now defined.

1. unit of analysis: the logical unit which is to be retrieved. In this program, the unit of analysis may be either an individual, a transition, or all occurrences of a variable. If individuals are to the unit, then 1589 records, number of respondents in the sample, will be retrieved.

A transition consists of adjacent states of a variable. For example, if an individual had held four jobs, the transition retrieval would consist of three records for that individual's job history. Record 1 would contain data for jobs 1 and 2; record 2 for jobs 2 and 3; and record 3 for jobs 3 and 4. If an individual has n entries for a variable, then there will be n-1 entries for him on the transition tape. If all occurrences are requested, then a record will be written for each occurrence of each variable.

2. dynamic variables: measurement taken retrospectively on various life areas. In the Life History Sample there are 15 dynamic variables, each containing data from the time the respondent was aged 14 until the time of the interview. A variable may have several sub-parts; for example the occupation variable contains data on wages, prestige, and hours worked.

3. static variables: measurements taken at a single point in time. Such variables as father's and mother's education, father's occupation are considered static because they were measured at a single reference point.

4. entry: a particular realization of a variable. If a respondent held ten jobs, then he has 10 entries on the occupation variable.

5. item or word: a sub-part of a variable. Each variable pertains to a particular life area. Within each variable, e.g. education several items or words, were collected. For example, in the full-time occupation variable, there are 31 different words, each indicating a different aspect of the job history.

6. contingent retrieval: to retrieve a word of a variable dependent upon the occurrence of a specified event of a variable. An example of this type of retrieval is a request to retrieve the prestige of the occupation held when the respondent was first married.

7. cumulative retrieval: to retrieve the duration or the number of times an event of a variable occurred between two specified event or time points. For example, the number of times the respondent was unemployed from his entry into the labor force until his thirtieth birthday, exemplifies this type of retrieval.

In Figure A.7, a flow diagram of the retrieval program is provided to help orient the user to the basic logic of the program.

Figure A.7 About Here

In the figure, each box is labelled to facilitate the following discussion. The first branching point (box 1) is taken depending upon whether the unit of analysis is the respondent or a transition of a variable.

Transition of Unit of Analysis or a Transition of a Variable.

If a transition is requested, then all words for all entries of the requested variable are retrieved. For example, if the transition option were requested for variable 2, full-time occupation, then record one would contain 31 words pertaining to job one, and 31 words pertaining to job two. In addition, 13 items of static information are automatically included with the transition option, physically placed at the end of the transition record. These 13 items are:

1. Id number (1)
2. Highest educational attainment (24)
3. Total number of siblings (26)
4. Calendar birth month (28)
5. Race (31)
6. Verbal ability (32)
7. Father's education (40)
8. Mother's education (42)
9. Father's occupation (44)
10. Father's industry (45)
11. Father's prestige (70)
12. Mother's prestige (71)
13. Data last in full-time ed (73)

The numbers in parentheses refer to the word number in the static information; see pages 1-15 of part 2.

If the transition option is requested, no other retrieval options can be simultaneously requested.

How the data is stored

The Life History data is stored as 3178 records, or as one fixed-length record, consisting of static information and of formatting information and one variable length data record for each of the 1589 respondents. Examples of "static" information are ID number, birthdate, race, and date of labor force entry. See Appendix B for listing of the 73 static variables. The second record is composed of the data entries for all variables for each person. Examples of variables include "Education," "Full Time Employment," and "Part Time Employment." Each variable has a time dimension associated with it and consists of a set of related items. For example, each full-time job a respondent held is recorded as an entry of Variable 02 ("Full Time Employment"); items in this field include beginning and ending dates, occupation and industry census codes, hours worked per week, and income.

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[1] Zahava Blum, Nancy Karweit, and Aage Sorenson, "A Method for the Collection and Analysis of Retrospective Life Histories," Report No. 48 (July, 1969), Center for Social Organization of Schools, The Johns Hopkins University; and Nancy Karweit, "Storage and Retrieval of Life History Data," *Social Science Research*, 2 (1), March, 1973 (also Report No. 54, Center for Social Organization of Schools, The Johns Hopkins University).

[2] Nancy Karweit, "Life History Data; Documantation to accompany computer tape *B* and Program *B*," Center for Social Organization of Schools, The Johns Hopkins University. A full example begins on page 63.

[3] In the "Documantation to accompany computer tape *B* and program *B*" (op. cit.), these fields are referred to as "variables;" the label used by LIFE.FOR is "IVAR."

The function of the retrieval program

As the life history data are stored, they are not usable by standard social science packages, such as SPSS or BMD. The function of the retrieval program (LIFE.FOR) is to analyze control card requests for data, locate the required data and create a data base which is readable by standard computer programs.

This retrieval program accomplishes this task by using the formatting information in the first part of each person's record to tell it how to read the actual data portion. The data portion is read into a vector "X". Based upon the number of entries that this individual has for his life history and the request to be handled, the retrieval program computes the appropriate index location within the vector X to handle the request.

Control Card Information

LIFE.FOR retrieves and writes out data according to instructions which are supplied on control cards. The five kinds of control cards are the NUMBER CARD, the FORMAT CARD, the STATIC CARDS, the MAJOR CARDS (Single Event, Cumulative, and Variable/Transition), and the MINOR CARDS. These cards must be submitted in this order.
The NUMBER card is required and tells the program how many retrievals, their type, and the number of cases to be read (in testing out the retrieval set up it is useful to do a sample run on say 20 cases). The FORMAT card provides the output format with which the file will be written. It is required. STATIC card(s) detail(s) the particular static variables to be retrieved, and are optional. However, the user most likely will want the ID number to be part of the output file.

The MAJOR cards specify whether the unit of analysis to be retrieved is a transition of a variable or all occurrences of a variable, or an individual respondent. If the unit of analysis is to be the respondent the MAJOR card indicates the type of retrieval, i.e. single event, or cumulation of the number of times (count) or the duration of the occurrence of an event from time (or event point) one to time (or event point) two. The MINOR card is used only in conjunction with the request for transition or all occurrences as the unit of analysis on a preceding MAJOR card. The MINOR cards are used to retrieve the state of other variables at the beginning date of the transition of the variable or the state of the variable. For example, if a MAJOR card requested that a retrieval be made of all education entries, the MINOR card could be used to retrieve the corresponding entry on another variable, such as income of part-time job or marital status at that time.

Following is a description of the format of each control card type.

Description of the Format of Each Control Card Type

NUMBER CARD (Required)

Cols.	Name	Values	Instruction description
1	LMAX	1,2	Number of FORMAT CARDS (the specification of the format of the output file.)
3	NSTTCH	0,1,2	Number of STATIC CARDS (as described below).
5-6	N15CD	0-99	Total number of MAJOR CARDS.
8	NM1NCD	0,1,2,3	Number of MINOR CARDS
10	KTAPE		Output device:
		6	Printed output;
		9	Output written on tape.
12	1FORM		Fortran output mode (must correspond to FORMAT CARD):
		I	Integer (fixed decimal) (income, wages rounded off to nearest $);
		F (or blank) --	Floating decimal.
14-17	NCASE	1-1589	Number of cases to be read from the input tape. Normally = 1589; for trial run, try 15.

FORMAT CARD (Required)

1-80	FMTO		Fortran format statement; this is the format with which output will be written. NOTE: if output mode is F, F1.0 must be added to the format for each item given in the documentation (i.e., an item input as F2.0 becomes F3.0); a minimum of F3.0 or I2 is required for all items because missing data is coded -1.

STATIC CARD (Optional; maximum number is 2)

Cols.	Name	Values	Instruction description
1-2	ITEMP	1-39	Number of static requests appearing on this card.
3-4	ISTAT	*	The first item number of static information to be retrieved (if this is the second STATIC card, the 40th item).
5-80	ISTAT	*	The second, third, etc. static items (or 41st, 42nd, etc.), one item per two columns, (NOTE: static items may be listed in any order).

MAJOR CARD, ALL OCCURRENCES OR TRANSITION AS UNIT OF ANALYSIS

(Optional; only one such card permitted; note that several output records will be written for each respondent, depending on the number of occurrences of the variable given in cols. 2-3).

1	ITYPE	4	Specifies retrieval of all items of all occurrences of the variable specified in cols 2-3 (IVAR).
		5	Specifies retrieval of transitions in the variable IVAR (i.e transitions form one occurrence to the next; all items of the variable are retrieved). If ITYPE = 5, PMTO (FORMAT CARD) must specify the format of variable IVAR twice for output.
2-3	IVAR	*	IVAR is the number of the variable to be retrieved. The remainder of this card is left blank.

MAJOR CARDS, CUMULATIONS (Optional)

Cols.	Name	Values	Instruction description
1	ITYPE	2	Specifies cumulation of the number of times an event (a certain state of affairs) occurs. Specifies cumulation of the duration of a certain state of affairs (i.e., cumulation of total time, in months, a given item IWRD of a given field IVAR equals a certain value XVALC).
2-3	IVAR	*	The variable for which cumulation is to be made.
4-5	BLANK		
6-7	IWRD	*	The item of IVAR which will determine which occurrences of IVAR will be used in cumulating; see XVALC.
8-9	ICNTG	04	Cumulate when equal values are encountered. That is, cumulation of the number of times (if ITYPE =3) is made only when the value of item IWRD of variable IVAR is equal to the value given in cols. 18-25 (XVALC, "equivalence value").
		05	Cumulate when not equal values are encountered (i.e cumulation is performed only for occurrences of IVAR in which IWRD $\neq$ XVALC).
		06	Cumulate when values greater than that of XVALC are encountered (e.g. if XVALC = -1, all occurrences of IVAR would be cumulated, because all values of IWRD are normally greater than 0).
		07	Cumulate for values less than that of XVALC.

MAJOR CARDS (cont.)

Cols.	Name	Values	Instruction description
		08	Cumulate when equal values are encountered and the duration of the state is greater than the value specified in columns 10-13, ITIME.
		09	Cumulate when not equal values are encountered and the duration is greater than the value of ITIME (cols. 10-13).
		10	Cumulate when values greater than XVALC are encountered and duration is greater than ITIME (cols. 10-13).
		11	Cumulate when values are less than XVALC and duration is greater than ITIME (cols. 10-13)
10-13	ITIME	1-481	ITIME specifies the duration for option 8-11 of ICNTG
18-25	XVLAC	(as desired)	XVALC is the value to be compared to the value of IWRD according to the criterion specified by ICNTG (that is, =, /, or <). If the criterion holds, cumulation will be performed; if it does not hold, LIFE.FOR will skip this occurrence and go on to the next.
			NOTE: The following intructions delimit a time period for which cumulations will be made. Time A demarks the beginning of cumulation, Time B the end.
30-31	KTYPA	KTYPA	KTYPA specifies the type of time to be used for Time A:

MAJOR CARD: CUMULATIONS [RESPONDENT]

Cols.	Name	Values	Instruction description
		01	Direct Time. Time A is given directly by KTIMA (cols. 32-35); Cols 36-51 are blank.
		02	Indirect Time. Time A is determined by the occurrence of another event as specified in cols. 36-51 (cols. 32-35 are blank).
		03	Static Time. Time A is the value of an item of static data. This item is specified by KWRDA (cols. 38-39). (Aside from KWRDA, all other cols. from 32-51 are blank).
32-35	KTIMA		KTIMA is Time A if Direct Time was specified (KTYPA = 01).
		1929-1969	KTIMA is a year from 1929- to 1969.
		0001- 481	KTIMA is a month (see ITIME, page 37 for explanation).
		9914-9939	KTIMA is the respondent's age; cols. 32-33 = 99 and cols. 34-35 = desired age in years.
36-37	KVARA	*	Kvara is the contingent variable used to determine Time A if Indirect Time was specified (KTYPA = 02).
38-39	KWRDA	*	If Indirect Time was specified, KWRDA is the contingent item of variable KVARA which will be compared to XVALA (cols. 40-47) in determining Time A. If Static Time was specified (KTYPA = 02), KWRDA is the item of static data whose value will determine Time A.
40-47	XVALA	(as desired)	XVALA is the equivalence value to be used if Indirect Time was specified. The first occurrence of KVARA for which the value of KWRDA equals XVALA will be selected, and the beginning date of this occurrence of KVARA will be used to specify Time A. Include decimal point in col. 47 and right adjust.

* See documentation for possible values.

Cols.	Name	Values	Instruction description
48-51	IDELTA	-481 to +481	IDELTA is a time increment (in months) which will be added to the time found above to determine Time A.
52-53	KTYPB		KTYPB specifies the type of time to be used for Time B:
		01	Direct Time. (cols. 58-69 blank).
		02	Indirect Time. (cols. 54-57 blank).
		03	Static Time. (cols. 54-59 and 62-69 are blank).
54-57	KTIMB		Time B if Direct Time was specified; See KTIMA (cols 32-35) for explanation.
58-59	KVARB	*	Contingent variable in Indirect Time was specified; see KVARA.
60-61	KWRDB	*	Contingent item (if Indirect Time) or static item (if Static Time specified; see KWRDA.
62-69	XVALB	(as desired)	Equivalence value used to determine Time B is Indirect Time was specified; see XVALA.
70-73	IDELTB	-481 to +481	Time increment to be added or subtracted for Time B; see IDELTA (cols. 48-51).

MAJOR CARDS, SINGLE EVENT (Optional)

1	ITYPE	1	(Specifies "single event" retrieval).
2-3	IVAR	*	Variable from which retrieval will be made.
4-5	INTRY	1-99	The occurrence of entry of the variable IVAR from which retrieval will be made (i.e. if INTRY = 1, the item will be retrieved from the first entry of IVAR). If INTRY is greater then the number of entries for a given respondent, then the the last entry is used; thus INTRY = 99 specifies retrieval from the last entry of the variable IVAR (Cols. 2-3).

Cols.	Name	Values	Instruction description
	INTRY	00 (or blank)	Specifies "contingent retrieval"; an occurrence of the field will be selected for retrieval contingent on the conditions specified in columns 8 through 29.
6-7	IWRD	*	IWRD specifies the item of IVAR to be retrieved.
8-9	ICNTG		Type of contingency -- if Intry is not 00 or blank, then ICNTG and the remainder of the card must be left blank; otherwise:
		01	Direct Contingency. The occurrence of IVAR for which information is to be retrieved is directly contingent on a time value. This time value must be specified in cols. 10-13, ITIME. In this case, cols. 14 on are left blank.
		02	Indirect Contingency. The time value for which LIFE.FOR will retrieve the requested information is defined by the occurrence of another event. That is, the retrieval is contingent on a specified item (called the "ontingent item") of another field (calles the "contingent variable") being equal to a specific value (called the "equivalence value"). In this case columns 10-13 are left blank and columns 14-29 are filled in as indicated below.
		03	Static Contingency. The occurrence for which retrieval will be made is determined directly by a date given in the static data. Examples are retrievals at date of marriage or date of labor force entry. In this case cols. 10-15 are left blank, as well as cols. 18-25 and cols. 30 on.

Cols.	Name	Values	Instruction description
		04	Duration Contingency. The first occurrence whose duration is greater then, less then, or equal to the specified duration (see cols. 10-13) value is retrieved. The comparison mode (<, >, =) and the duration value (in months) are specified by ITIME (columns 10-13).
		06	Computed Comtingency. This option is similiar to indirect contingency except that the equivalence value (XVALC) is not specified directly. XVALC instead determined and computed by retrieval of a specified variable (col. 14-15) and (16-17) at a specified time (10-14). Thus XVALC can be a different value for each variable.
10-13	ITIME		ITIME is the time for which the value of XVALC should be found for computed contingency, ICNTG=06. ITIME is the contingent time in the case of Direct Contingency (i.e. if INTRY=00 and ICNTG=01.
		1929-2969	ITIME is a year from 1929 to 1969.
		0001-0481	ITIME is a specific month. Months are counted beginning with month 1= January, 1929 up to month 481= January, 1969 (see last page of documentation for chart showing correspondence of the actual month and year with each "number" month);
		9914-9939	ITIME is the respondent's age. Cols. 10-11 contain 99 and cols. 12-13 contain the age in years for which retrieval is desired (LIFE.FOR adds 6 months to date at which respondent reached age given in cols. 12-13).

Cols.	Name	Values	Instruction description
		7000-7481	If duration < 0
		8000-8481	If duration = 0
		9000-9481	If duration > 0
14 - 15	IVARC	*	IVARC is the contingent field in the case of Indirect Contingency (ICNTG=02); see IWRDC. If ICNTG=4 IVARC should be set equal to contingent variable over which duration will be checked.
16 - 17	IWRDC		If ICNTG=02 (Indirect Contingency), IWRDC is the contingent item number. The beginning date of the first entry of this item of IVARC for which the value equals XVALC (equivalence value) will be used as the contingent date for the retrieval of the requested information (i.e. of item IWRD of field IVAR).

---

[*] See documentation for possible values.

Note: Because many events have contiguous ending and beginning dates, there is some ambiguity as to which event is the correct one to recrieve. For example, if there are four jobs with these dates

249 253
253 256
256 265
265 271

the occupation held in months 253, 256 and 265 are not uniquely defined.

An example in which this is somewhat problematic is the case of retrieving the first occupation held exactly six months. The program would determine that the 1st such occupation was held between 265 and 271, it would then use the beginning date (265) to find the appropriate occupation, which it would find as the one held in 256-265. To remedy this, simply add a 1 month constant in IDelt.

Cols.	Name	Values	Instruction description
		*	If ICNTG=03 (static contingency), IWRDC is the item of static data which will determine retrieval. NOTE: This must be an item which is expressed as a month from 1 to 481.
		00	In all other cases, IWRDC is 00 or blank.
18 - 25	XVALC	(as desired)	Equivalence Value; for Indirect Contingency (ICNTG=02), XVALC is the value used in determining the date for which retrieval will be made. If the item IWRDC of the field IVARC is equal to XVALC, then the beginning date of this occurrence of IVARC will be used to retrieve the requested item IWRD of field IVAR. Col. 25 contains a decimal point; adjust right.
26 - 29	IDELT	-481 to +481	IDELT is a time increment, expressed in months, which will be added to the contingent time value in determining entry to be retrieved. The given date (for Direct Contingency), beginning date (for Indirect Contingency), or the date stored in static data (for Static Contingency) will first be determined as above. If retrieval is desired contingent upon a time before or after this date, rather than the exact date itself, then IDELT can be used to add or subtract the desired time increment. This enables, for example, retrieval of income at time points just before (e.g. IDELT= -006) and just after (e.g. IDELT= +006 or IDELT= 6) marriage. If no time change is desired, IDELT should be blank or 0.
30 - 31	KTYPC	01	EQUAL COMP
		02	LESS
		03	GT

MINOR CARDS

(Optional; maximum number is 3; must be preceded by a Variable or Transition MAJOR CARD).

NOTE: Minor Retrievals are contingent, single event retrievals (similiar to those described by ITYPE = 1, INTRY = 00; see page); retrieval of an item is contingent upon the beginning date of the occurrence of a variable (if ITYPE = 4 on preceeding MAJOR CARD) or upon the date of a transition (if ITYPE =5).

1	ITEMP	1-9	The number of Minor Retrieval requests appearing on this card.
2-3	IMINOR (1)	*	The variable number of the first Minor request (of the tenth request if this is the 2nd MINOR CARD, the nineteenth request if this is the 3rd MINOR CARD).
4-5	IMINOR (2)	*	The item number of the first (or 10th or 19th) Minor request.
6-9	IMINOR (3)	-481 to +481	A time increment to be added to the beginning date or to the date of transition of IVAR (preceding MAJOR CARD); the resulting date will be used to select the occurrence of the Minor Variable (cols. 2-3) for which the value of the Minor Item (cols. 4-5) will be retireved (first, 10th, or 19th Minor request).

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* See documentation for possible values.

Figures and Tables

Table A.1

Summary of information collected in life history survey

A. Time-Dependent Data, Age 14 to Present

Variable Name	Details	Comments and Definitions
1. Full-time education	Name and/or type of school Degree/highest grade completed	If respondent received "public support" for education (e.g., G.I. Bill of Rights), that information is recorded under No. 11.
2. Full-time employment/ unemployment	For each period of employment, the following is recorded: (a) occupation (b) industry (c) starting and ending wages (d) wages in kind (if applicable) (e) hours/week (f) reason for termination: own decision not own decision (g) at termination: had new job knew of job neither (h) got job through: friends public agency private agency advertisement other (i) formal on-the-job-training (j) union membership	Full-time employment is defined as employment which requires at least 35 hrs/week.

Table A.1 (cont.)

3. Part-time employment	Same as (a)-(e) of No. 2 above.	Part-time employment is defined as employment which requires less than 35 hrs/wk.
4. Part-time education	Name and type/purpose of school; Diploma/certificate or course	Formal schooling in which respondent engaged on a basis that was less than the standard "full-time student."
5. Military service	Drafted or enlisted Location of longest stay while on active duty Place of discharge Ranks at entry and discharge Military education	Military education is education the respondent received in the military which is equivalent to civilian education. Excludes training received for military occupations.
6. Other full-time activities	Activities not included in other "full-time" variables	E.g. major illnesses, travel, prison etc.
7. Family history	Marital status Age of wife at marriage Births, deaths, and adoptions of children	Common Law marriages are included as "marriage."
8. Wife's education	Degree or highest grade completed at time of marriage Education subsequent to marriage	For wife's education subsequent to marriage, only the completion date recorded.
9. Wife's employment	Same as items (a)-(e) of No. 2 above	Wife's employment recorded only during marriage to respondent.

Table A.1 (cont.)

10. Household composition	Relationships to respondent of all individuals with whom he was living	
11. Income adequacy	R's perception of whether or not the household of which he was a member was: able to save live comfortably without saving just manage need outside help	If R reports that the household needed outside support, the source (if public) was recorded.
12. Home details	Type of housing No. of rooms Rent/own/share Neighborhood	For each housing unit, we inquired as to whether the immediate area was all white; mostly white; half white- half non-white; mostly non-white; or all non-white.
13. Migration history	City/town County State	If foreign, name of country only. For each rural location, we record whether location is farm or non-farm.
B. Cross-sectional data		
15. Siblings		
16. Father's education Mother's education		If no father and/or no mother at age 14, education of father substitute recorded and the relationship to respondent of the substitute is specified.

Table A.1 (cont.)

17. Father's occupation and industry Mother's occupation and industry		Same instructions for "substitute" apply here as in the case of parental education
18. Family happiness at age 14		
19. Nationality	"What is the main nationality in your mother's background?" "What is the main nationality in your father's background?"	Asked of whites only.
20. Religion	a) Religion of family of origin b) Present religion	If a) and b) are different--year of change is recorded
21-22. Voting behavior	a) Last presidential election b) Year of first vote	
23. Open-ended item dealing with major changes in Respondent's life		After respondent completes reply, direct probes deal with Family life Job/career Education Military service Major moves if respondent has not mentioned these life areas previously.
24. Short-form verbal achievement test		Adopted from Miner
25. Social security number		Requests number and permission for access to Social Security file.

Table A.2

Average Number Entries/Item

Variable Number	Number of items	Maximum number of entries in sample	Average number of entries in sample
01	6	40	4.97
02	7	19	1.35
03	3	14	1.08
04	4	7	1.23
05	28	40	8.39
06	28	13	1.99
07	3	9	1.35
08	5	18	3.14
09	3	7	1.46
10	11	22	7.69
11	20	26	2.06
12	2	18	2.55
13	6	13	1.17
14	7	26	7.15
15	6	21	4.96

Table A.3

Average Number Entries/Variable

Variable	Actual total number of entries/variable	Average number of entries/variable (typical respondent)
1	47,448	29.82
2	15,043	9.45
3	5,178	3.24
4	7,832	4.92
5	373,576	234.92
6	88,564	55.72
7	6,462	4.05
8	25,005	15.70
9	6,993	4.38
10	134,475	84.59
11	65,600	41.20
12	8,530	5.10
13	11,250	7.02
14	79,618	50.05
15	42,324	26.82
Totals	917,898	576.98

Figure A.1

NATIONAL OPINION RESEARCH CENTER
University of Chicago

Survey 4068
January, 1969

TIME BEGAN: 7:00 ~~AM~~ PM

LIFE CIRCUMSTANCES STUDY

Segment Number: 654-321

DULS Line Number: 12

Street Address: 123 Vickers Road

City and State: Hampstead, Long Island, N.Y.

INTRODUCTION

This is a study to find out how early events in life may affect later events.

I am going to ask you when certain things occurred in your life, beginning when you were fourteen years old. As we talk, you will probably think of other things which have happened to you. Even some which you might think are not important, we would like to know about.

I have a year-by-year calendar on which to record when these events took place. Sometimes when you are not able to remember the exact year, you may be able to tell me how old you were at the time, or what else happened to you at the same time.

Information of this kind will help us obtain the correct dates and a complete picture of your life.

First, how old were you on your birthday in 1968, and when was your birthday?

39 (Age)

January 6, 1929 (Birth date)

TEAR AGE STRIP SO THAT AGE IN 1968 IS AT THE BOTTOM OF STRIP. AFFIX AGE STRIP TO PAGE 2 SO THAT AGE IN 1968 APPEARS NEXT TO "1968."

Figure A.1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

Year	Age	1. FULL TIME EDUCATION (a) Month	(b) Name and/or type of school	(c) Degree/highest gr.comp.	2. FULL TIME EMPLOYMENT OR UNEMPLOYMENT (Ask 11-a "Support," for unempl.) (a) Month	(b) Occupation	(c) Industry	Wages (d) In $ Beg. Amt.	End'g Amt.	(e) In kind F=food H=hous'g	(f) Hrs/wk	(g) Left Job: O=own decision N=not own decision	(h) At termination: H=had new job K=knew of job N=neither	(i) Got Job thru: Fr=Friends Fa=Family Pu=Pub.ag. Pr=Priv.ag. A=Ads O=Other	(j) On-the-Job Training (incl. apprentice trng.) How long? Never! ☐
1943	14		Barker Elem.												
1944	15	June Sept	Barker Cons. HS	8 9											
1945	16	June Sept	St. Louis Public HS	10											
1946	17	Sept	↓ Oct	10	Nov Dec	Unemployed (see note p. 3) Attendant	 Gas Station	 .75 hr			 40				
1947	18					↓	↓		.75hr			N	N	A	
1948	19				Apr-July	Stock Clerk Army (see 5.)	Dept. Store	.80 hr	.80		40	N	N	Pu	
1949	20														
1950	21														
1951	22				Feb	Driver	City Bus Co.	1.10 hr			40				
1952	23													A	Driver Training 3 weeks
1953	24	Sept	City College of New York		Aug	↓	↓								
1954	25								1.30 hr		40	O	N (see note)		
1955	26	June	↓	BA (Business)	June	Salesman	Levin Bros. Soap Mfg.	$6,000 yr			42				
1956	27													O	Management Training Program - 6 weeks
1957	28														
1958	29					↓	↓		$7,500 yr		40	O	H		
1959	30				Aug	Area Supervisor	O. Sedar Brush Co.	$8,250 yr			40-4			O	
1960	31														
1961	32														
1962	33														
1963	34														
1964	35				Feb	↓			$11,000 yr		40-45	Y	N		
1965	36				March	Office Manager		$12,000 yr			45-50	leave of absence for illness			
1966	37													back to same job	
1967	38														
1968	39					↓	↓								
Current						Office Manager	O. Sedar Brush Co.	$13,000 yr			45-50				

Figure 1

Figure A.1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

USE 2-A ONLY IF R HAD MORE THAN TWO JOBS IN GIVEN YEAR & ALWAYS GO BACK TO P.2 FOR NEXT YEAR.

2-A
FULL TIME EMPLOYMENT OR UNEMPLOYMENT:
(Ask 11-a "Support," for unempl.)

(k) Name of Union Never? ☒	(a) Month	(b) Occupation	(c) Industry	Wages (d) In $ Beg. Amt.	Wages (d) In $ End'g Amt.	(e) In kind F=food H=hous'g	(f) Hrs/wk	(g) Left Job: O=own decision N=not own decision	(h) At termination: H=had new job K=knew of job N-neither	(i) Got Job thru: Fr=Friends Fa=Family Pu=Pub.ag. Pr=Priv.ag. A=Ads O=Other	(j) On-the-Job Training (incl. apprentice trng.) How long? Never? ☐	(k) Name of Union Never? ☐	Year
													1947
	Jul-Sept	Ice Cream Seller (walking cart)	Dairy-Ice Co.	(got commission $50 wk	$60 wk		50 est	O	K	Fr			1947
	Sept-Dec	Laborer	Hiway Const. Co.	$1 hr	$1 hr		40	N	N	Pu			

NOTES

Nov. 1946 R looked for work without success after quitting school. He dropped out after repeating 10th grade for a month.

Aug. 1953 R stopped working full-time for Bus Co. in order to give full time to his studies, but cont'd to drive bus on a part-time basis.

Figure A.1 (cont.)

USE THIS PAGE FOR EXTRA NOTATIONS BUT ALWAYS INDICATE YEAR AND COLUMN TO WHICH NOTE APPLIES.

Year	
1943	Col. 12 - R not sure if actual rent was paid or part of sharecropper arrangement
1944	
1945	
1946	
1947	
1948	
1949	
1950	
1951	Col. 4 - R was half-time student for a few years, worked toward B.A.
1952	
1953	
1954	
1955	
1956	
1957	
1958	
1959	
1960	
1961	
1962	
1963	
1964	
1965	
1966	
1967	
1968	
Current	

Figure 1 (continued)

Figure A.1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

3. PART-TIME EMPLOYMENT: Never? ☐ (a) Month	(b) Occupation	(c) Industry	(d) Wages	(e) Hrs Wk	4. PART-TIME EDUCATION: Never? ☐ (a) Name and/or type of school	(b) Month	(c) Degree, Diploma, Certificate or Course	(d) Tuition R=Self E=Empl. O=Other	5. MILITARY SERVICE: (a) Draf./Enl. [illegible]	(b) Beginning & ending rank	Never? ☐ (c) Education Never? ☐	6. OTHER FULL-TIME ACTIVITIES: Major Illnesses? Travel? Etc.?	Year
													1943
													1944
													1945
													1946
									Dec.-	Priv.			1947
									drafted		G.E.D. H.S.diploma		1948
									Georgia				1949
									Dec.-Mo.	Corporal			1950
					City College of New York	Sept.	Business Major	0	Ft. Leonard Wood				1951
								0					1952
Sept.	Bus Driver	City Bus Co.	$1.30 hr	30		Aug.		0					1953
↓													1954
Feb. Feb.-May	 Library Asst.	 Univ. Library	$1.40 hr $1.25 hr	20 25									1955
													1956
													1957
													1958
													1959
													1960
													1961
													1962
													1963
												Feb.-Tuberculosis ↓	1964
												March	1965
													1966
													1967
													1968
													Current

Figure A.1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

Year	7. FAMILY HISTORY (a) Month & Marital Status	(b) Wife's age at marri-age	(c) Children M=male F=Female Mo.of Birth	(d) Birth control dur.mar. Never? ☐	8. WIFE'S EDUCATION: Degree or highest gr.comp.at mar.&since	9. WIFE'S EMPLOYMENT (during marriage to R.): Never? ☐ (a) Month	(b) Occupation	(c) Industry	(d) Wages	(e) Hrs/wk	10. HOUSEHOLD COMPOSITION: Relationships	11. INCOME ADEQUACY: S=Save C=Comfort, no save M=Manage D=Need out-side help	(a) Public Support Share of total income A=All M=More than ½ H=About half L=Less than ½ N=None	Kind of Support
1943											Mother, Step-father, 2 Bros., Aunt	M		
1944														
1945											(June) Mother, Step-father 2 Brothers			
1946	Nov married	16		no	10th gr						(Nov) Wife and above family	D (family)		
1947			M-July								(June) Wife (July) Wife + Son (Dec) Military	M C		
1948						Jan	Cleaning Lady	Gov't Hosp.	.65 hr .80 hr	40				
1949						Dec	Sales Clerk	10¢ Store	.95 hr	40				
1950											(Dec) Wife + son	M		
1951	June divorced					June					(Jan) alone	M	L	G.I. Bill (Sept
1952														
1953														
1954											(July) Roommate			
1955													L	(June)
1956	July married	23		yes	A.B.	July	Journalist	Daily News Paper	$5,000 yr	40	(July) Wife	C		
1957				no										
1958			F-May	–		Feb			$5,250 yr	40	Wife + daughter (May)			
1959			F-Sept	–							" + 2 daughters (Sept)			
1960				yes										
1961												S		
1962														
1963														
1964						Sept	Journalist	Daily News Paper	$7,500 yr	35	Wife, 2 daughters, Mother-in-law			
1965												C (illness)		
1966												S		
1967														
1968														
Current	married								$9,500					

Figure 1 cont.

Figure A.1 (cont.)

INTERVIEWER: ALWAYS INDICATE STOPPING POINT BY END OF ARROW.

12. HOME DETAILS					13. WHERE LIVING					
(a) Month	(b) Type	(c) # Rooms	(d) Own/Rent/Share-no rent	(e) Neighborhood AW=all white MW=mostly white HH=about ½ & ½ MNW=mostly non-wh. ANW=all non-white	(a) City/Town	(b) County	(c) State	(d) RF RNF	(e) Month	Year
	House	3	R *see p.4	Rural - no neighborhood	---	Barker	Miss.	RF		1943
										1944
June	Apt.	4	R	ANW	St. Louis		Mo.		June	1945
										1946
June Dec.	Apt. Barracks	2 -	R -	ANW -	Army				Dec.	1947
										1948
										1949
Dec.	Apt.	3	R	ANW	St. Louis	Barker	Mo.		Dec.	1950
Jan. June	Apt. Apt.	1 1	R R	ANW HH	Newark New York	-	NJ NY		Jan. June	1951
										1952
										1953
										1954
										1955
July	Apt.	2	R	HH						1956
										1957
May	Apt.	4	R	MW						1958
										1959
Oct.	House	7	O	MW	Hampstead	Long Island Nassau	NY		Oct.	1960
										1961
										1962
										1963
										1964
										1965
										1966
				HH						1967
										1968
										Current

We've asked you about your life history in the preceding questions. Now we have some general questions about your background.

14. Where were you born?

Milk Junction (City/Town) Barker (County) Mississippi (State)

IF FOREIGN BORN: In what year did you come to this country? 19 --

15. How many brothers and sisters did you or do you have, all told?

2 Brothers 0 Sisters

16. A. What was the last year of schooling that your father completed?

3rd Grade

(If Education is for father substitute, check ☒ and specify relationship:

Step-father)

B. What was the last year of schooling that your mother completed?

6th Grade

17. A. When you were 14, what kind of work did your father do?

OCCUPATION: Sharecropper (laborer)

INDUSTRY: Agriculture - cotton

(If occupation is for father substitute, check ☒ and specify relationship:

Step-father)

IF NO FATHER & NO SUB. AT R'S AGE 14, CHECK BOX ☐

B. What kind of work did your mother do, when you were 14?

OCCUPATION: Domestic

INDUSTRY: Private homes

18. Around the time you were 14, would you say your family was:

- Very happy ☐
- Somewhat happy ☐
- Somewhat unhappy ☒
- Very unhappy ☐

Figure A.1 (cont.)

19. ASK FOR WHITES ONLY:

A. What is the main nationality in your mother's background?

B. What is the main nationality in your father's background?

20. A. In what religion were you brought up? Baptist

B. Is (religion in A) your religion now, or do you have a different religion now?

Same ☐ Different ☒

IF DIFFERENT NOW:

C. What is your religion now? Episcopalian

D. When did you change? 19 56

21. Did you vote in the last Presidential election?

Yes ☒ No ☐

IF YES:

A. For whom did you vote? Humphrey

22. What was the year of the first election in which you voted? 19 52

(Check box ☐ if never voted.)

23. A. In thinking back about your life, what are the major things, good or bad, that have happened in your life which changed it in a way you did not expect? (PROBE: How did that change your life? What other major things changed your life in a way you didn't expect?)

The Army X I began to see a lot of different places and different kinds of people X I learned the importance of being educated and finished H.S., then I went to college on the G.I. Bill.

B. INTERVIEWER: AFTER RECORDING R'S RESPONSES IN A, CROSS THRU IN BOX EACH OF THE "LIFE AREAS" HE MENTIONED; THEN ASK Q. 23 SPECIFICALLY FOR EACH "LIFE AREA" NOT YET MENTIONED.

Life Areas to be covered:
- Family life
- Job/career
- Education
- Military (unless had none)
- Major moves

My second marriage X She had always had advantages X She helped me to live with other people X Well, not being so mad about my own lousy childhood X and she's great to live with X The crucial point was when the man from O. Sedar offered me a job. He knew I wasn't moving up fast enough at Levier Bros. X The best thing about moving was getting out of Mississippi X that's all.

24. We would like to know something about how people go about guessing words that they do not know. HAND RESPONDENT CARD. On this card are listed some words--you may know some of them and you may not know quite a few of them.

On each line there is a word in capital letters--like BEAST. Then there are five other words. Tell me the number of the word that comes closest to the meaning of the word in capital letters. If the word in capital letters is BEAST, you would say "4" since "animal" comes closer to "beast" than any of the other words. If you wish, I will read the words to you. These words are difficult for almost everyone--give me your best guess if you're not sure of the answer. CIRCLE THE ANSWER GIVEN BELOW.

SPACE	1 school	2 noon	3 captain	[✓ 4 room]	5 board	9 NA
BROADEN	1 efface	2 make level	3 elapse	4 embroider	[✓ 5 widen]	9 NA
CAPRICE	1 value	2 a star	3 grimace	[✓ 4 whim]	5 inducement	9 NA
EDIBLE	1 auspicious	2 eligible	[✓ 3 fit to eat]	4 sagacious	5 able to speak	9 NA
ANIMOSITY	[✓ 1 hatred]	2 animation	3 disobedience	4 diversity	5 friendship	9 NA
PACT	1 puissance	2 remonstrance	[✓ 3 agreement]	4 skillet	5 pressure	9 NA
CLOISTERED	1 miniature	[✓ 2 bunched]	3 arched	4 malady	5 secluded	9 NA
EMANATE	[✓ 1 rival]	2 come	3 prominent	4 free	5 populate	9 NA
ACCUSTOM	1 disappoint	2 customary	3 encounter	[✓ 4 get used to]	5 business	9 NA
ALLUSION	1 reference	2 dream	3 eulogy	[✓ 4 illusion]	5 aria	9 NA

Figure 1 (continued)

INTERVIEWER: CHECK ONE BOX BELOW:

R read words in Q. 24 himself ☒

You read words in Q. 24 to him ☐

25. Social Security Number: 636-84-4026

Figure A.1 (cont.)

That's the end of the interview. Thank you very much. You have been most helpful. I'd like to record your full name, address, and telephone number in case my office wants to verify this interview.

Harold Faulkner	123 Vickers Road	Hampstead	N.Y.	212 123-4567
(Name)	(Street)	(City)	(State)	(Telephone No., include area code)

S. S. Permission Yes ☒

No ☐

Time Ended: 8:10 ~~AM~~ PM

Total length of interview: 70 minutes

IMPORTANT - FILL IN THE ITEMS BELOW IMMEDIATELY AFTER LEAVING RESPONDENT

A. On the basis of your observation, rate the respondent and his home using the 4-point scale.

RESPONDENT IN INTERVIEW SITUATION:

Friendly	1	[✓ 2]	3	4	Hostile
Specific	[✓ 1]	2	3	4	Vague
Relaxed	1	[✓ 2]	3	4	Tense
Cooperative	[✓ 1]	2	3	4	Uncooperative
Interested	1	[✓ 2]	3	4	Not interested

FURNISHINGS IN RESPONDENT'S HOME:

Excellent quality	1	[✓ 2]	3	4	Poor quality
Excellent condition	1	[✓ 2]	3	4	Poor condition

B. Neighborhood description. CHECK ONE OF THE FOLLOWING:

- ☐ A wealthy, or "society"-type neighborhood; top business executives, prominent lawyers and doctors, and people with inherited incomes live here.
- ☐ A very well-to-do white-collar neighborhood--doctors, highly paid managers, strictly a professional and executive neighborhood.
- ☒ A good white-collar neighborhood--not many executives or doctors live here, but there are probably no blue-collar people, either.
- ☐ Predominantly white-collar neighborhood, though a lot of fairly well-paid blue-collar families live here also.
- ☐ Predominantly a blue-collar neighborhood--though some office workers might live here also.
- ☐ Strictly a working-class neighborhood, probably no white-collar workers live here.
- ☐ A neighborhood of laborers and unemployed.
- ☐ Rural farming area--houses are far apart; farmers appear to be prosperous.
- ☐ Rural farming area--houses are far apart; farmers appear to be having hard time making ends meet.

C. Respondent's race:

White 1
Black . . . . [✓ 2]
Other (SPECIFY) . . . 3

D. CHECK BOX FOR ONE SENTENCE BELOW.

- ☒ Respondent's wife was present but did not participate in interview.
- ☐ Respondent's wife participated but only with information about herself.
- ☐ Respondent's wife participated with information about herself and also helped R to remember information about himself.
- ☐ Respondent's wife was not present.
- ☐ Respondent is not married.
- ☐ Other person(s) present (SPECIFY)

INTERVIEWER'S SIGNATURE: Dolly Clipboard

DATE OF INTERVIEW: 12-28-68

Figure A.2 Date and event matrix

DATA STORAGE AND RETRIEVAL

	Occupation				Education				
	Item 1	Item 2	Item 3	Item 4	Item 1	Item 2	Item 3	Item 4	Item 5
Time	Date	Wages	Prestige	Reason for leaving	Date	Educ typ	Educ attn	Recode 1	Recode 2
1	1-3	500	01	1	1-5	1	0	4	3
2	1-3	500	01	1	1-5	1	0	4	3
3	1-3	500	01	1	1-5	1	0	4	3
4	4-5	700	01	2	1-5	1	0	4	3
5	4-5	700	01	2	1-5	1	0	4	3
6	6-10	800	02	1	6-9	5	1	3	4
7	6-10	800	02	1	6-9	5	1	3	4
8	6-10	800	02	1	6-9	5	1	3	4
9	6-10	800	03	1	6-9	5	1	3	4
10	6-10	800	03	1	10-18	8	3	4	0
11	11-13	700	03	1	10-18	8	3	4	0
12	11-13	700	03	1	10-18	8	3	4	0
13	11-13	700	03	1	10-18	8	3	4	0
14	14-18	1000	03	0	10-18	8	3	4	0
15	14-18	1000	03	0	10-18	8	3	4	0
16	14-18	1000	03	0	10-18	8	3	4	0
17	14-18	1000	03	0	10-18	8	3	4	0
18	14-18	1000	03	0	10-18	8	3	4	0

Figure A.3 Index and data portions.

	Occupation			Education		
	Event count	Item count	Data location	Event count	Item count	Data location
Index Portion	5	4	1	3	5	21

	Location		Location					
Data portion	1-4	5-8	16-20	21-25	26-30	31-35	36-40	41-45
	1st Entry Occ	2nd Entry Occ	5th Entry Occ	1st Entry Educ	2nd Entry Educ	3rd Entry Educ	4th Entry Educ	5th Entry Educ

Figure A.4 Contingent retrieval types

	Condition
Variable x_i	Before, at or after time t_j
Variable x_i	Before, at or after age a_k
Variable x_i	Before, at or after the occurrence of another event, i.e., when variable $x_j = C$
Max variable x_i Min variable x_i	The maximum or minimum value of this variable
Max time t_j Min time t_j	The date when variable x_i attains maximum or minimum value
Time t_j	When variable $x_j = C$
Duration D_i (duration of the event)	Before, at or after the occurrence of another event, i.e., when variable $x_i = C$

Figure A.5 Interrecord retrieval types

Retrieve	Condition	Screening
Variable x_i	Less than, equal to,[a] or greater than computed aggregate statistic	Computed aggregate statistic based on total sample of subsample
Time t_1	Less than, equal to,[a] or greater than computed aggregate statistic	Aggregate statistic based on total of subsample

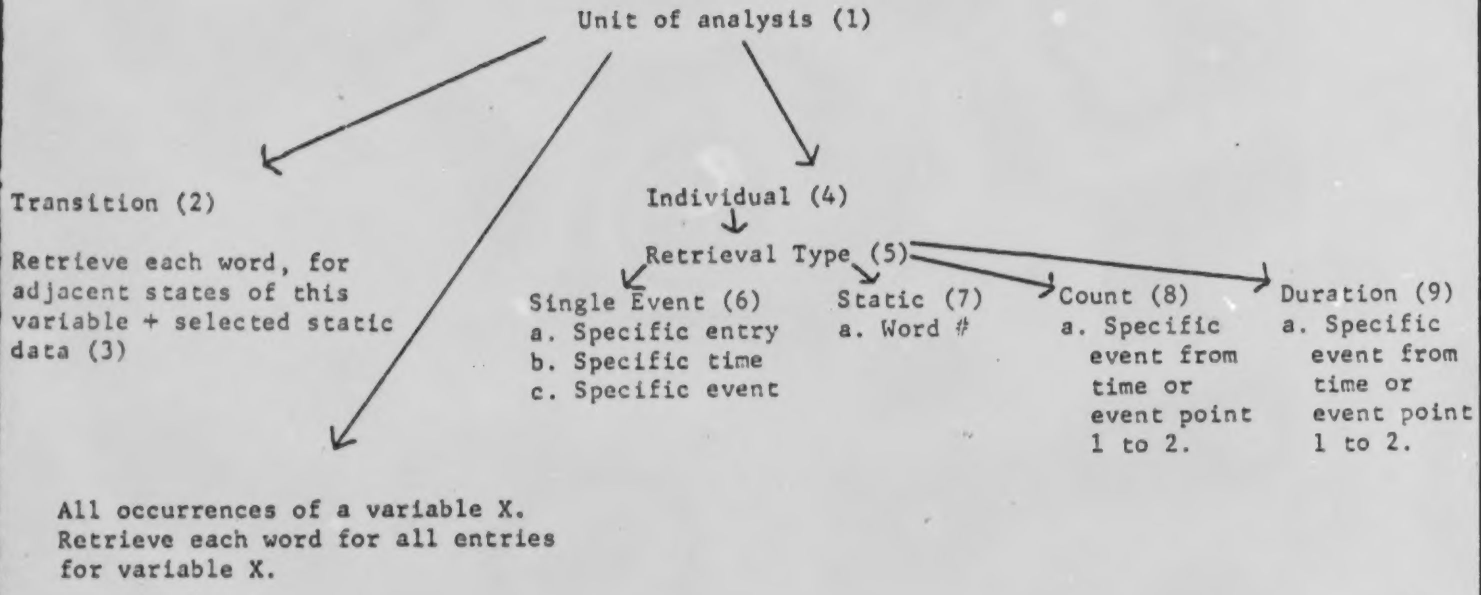
[a] "Equal to" condition will be met if the variable is within specified range.

Figure A.6 Cumulative retrieval types

Retrieve	Condition	Time 1	Time 2
The number of times	When variable x_i=a	Age, time, event occurrence, maximum or minimum value occurrence	Age, time, event occurrence, maximum or minimum value occurrence
The duration of the events	When variable x_i=a	Age, time, event occurrence, maximum or minimum value occurrence	Age, time, event occurrence, maximum or minimum value occurrence

Figure A.7

Flow Diagram of LHS Retrieval Program


Unit of analysis (1)
Transition (2)
Individual (4)
Retrieval Type (5)
Single Event (6)
a. Specific entry
b. Specific time
c. Specific event
Static (7)
a. Word #
Count (8)
a. Specific event from time or event point 1 to 2.
Duration (9)
a. Specific event from time or event point 1 to 2.

Retrieve each word, for adjacent states of this variable + selected static data (3)

All occurrences of a variable X. Retrieve each word for all entries for variable X.

Examples of Retrievals

Examples:

SINGLE EVENT RETRIEVALS

1. Retrieve the prestige of the occupation held at age 30.

ITYPE = 1 (single event)
IVAR = 02 (occupation)
INTRY = 00 (contingent upon age)
IWRD = 01 (prestige)
ICNTG = 01 (direct)
ITIME = 9930 (age 30)

2. Retrieve the prestige of the last occupation

ITYPE = 1 (single event)
IVAR = 02 (occupation)
INTRY = 99 (last event)
IWRD = 01 (prestige)

3. Retrieve the prestige of the occupation held at the date of marriage

ITYPE = 1
IVAR = 02 (occupation)
INTRY = 00 (contingent upon another value)
IWRD = 01 (prestige)
ILNTG = 03 (static date)
ITIME = blank
IVARC = blank
IWRDC = 27 (date of first marriage is the 27th word in status data)

4. Retrieve the prestige of the first occupation which lasted at least six months.

ITYPE = 1
IVAR = 02
INTRY = 00
IWRD = 01
ILNTG = 04
ITIME = 9006

5. Retrieve the prestige of the occupation held at six months after the borth of the first child.

ITYPE = 1
IVAR = 02
INTRY = 00
IWRD = 01
ILNTG = 02
ITIME = blank
IVARC = 17 (children)
IWRDC = 01 (birth)
XVALC = 1.0 (first one)

CUMULATIONS

1. Cumulate the number of months in full time education from age 14 to age 30.

```
ITYPE = 3      (number of months)
IVAR = 01      (education)
INTRY = 00     (will specify contingency value)
IWRD = 04      (activity/education)
ICNTG = 04     (cumulative when equal values found)
ITIME = blank
XVALC = 1.0    (activity = 1 for full time education)
KTYPA = 01     (direct time, e.g. age 14)
KTIMA = 9914   (age 14)
KVARA
KWRDA
       blank
XVALA
IDELTA
KTYPB = 01     (direct time, i.e. age 30)
KTIMB = 9930
KVARB
KWRDB
       blank
XVALB
IDELTB
XGO = blank
```

2. Cumulate the number of times being unemployed for at least six months from date of marriage until time of interview.

```
ITYPE = 2      (number of times)
IVAR = 01      (occupation)
INTRY = 00     (will specify contingency)
IWRD = 07      (occupation code)
ICNTG = 08     (cumulate when equal values found and duration is greater
                than specified value; see XGO)
ITIME = blank
XVALC = 900    (unemployment code)
KTYPA = 03     (first time is from status data)
KTIMA = blank
KVARA = blank
KWRDA = 27     (marriage month is contained in word 27 of statistical data)
XVALA = blank
IDELTA = blank
KTYPB = 01     (direct time, month)
KTIMB = 0481   (481 = January 1969)
KVARB
KWRDB
        blank
XVALB
IDELTB
XGO = 006      (length of duration of event)
```

3. Retrieve the number of months employed in the job held at age 30 from age 14 to time of interview.

```
ITYPE = 3      (number of months)
IVAR = 01      (occupation)
```

INTRY = 01 (equivalence value is noe know, will be computed [the job
IWRD = 07 held at age 30] equal values, program will check for all
ICNTG = 04 occupation codes which equal occupation code held at age 30)
ITIME = 9930 (the time for which XVALC is to be found, age 30)
XVALC = blank (this is determined by the program)
KTYPA = 01
KTIMA = 9914
KVARA
KWRDA
XVALA blank
IDELTB
XGO

4. Retrieve the number if times employed at least 6 months in the job held at age 30 from age 14 to time of interview.

ITYPE = 3
IVAR = 01
INTRY = 01
IWRD = 07
ICNTG = 08 (accumulate when IVAR, IWRD has the same value as the
ITIME = 9930 value of IVAR, IWRD at age 30 and is an event lasting
XVALC = blank longer than six months)
KTYPA = 01
KTIMA = 9914
KVARA
KWRDA blank
XVALA
IDELTA
KTYPB = 01
KTIMB = 0481
KVARB
KWRDB
XVALB blank
IDELTB
XGO = 006

PARAMETER VALUES

ITYPE	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3
IVAR	*	*	*	*	*	*	*	*
INTRY	00	00	00	00	01	01	01	01
IWRD	.	.	.	.	.	.	.	.
ICNTG	4,5,6 or 7		8,9,10,11		4,5,6 or 7		8,9,10,11	
ITIME					✓	✓	✓	✓
XVALC	✓	✓	✓	✓				
KTYPA[1]	01	02	01	02	01	02	01	02
KTIMA	✓		✓		✓			
KVARA		✓		✓		✓		
KWARDA		✓		✓		✓		
XVALA		✓		✓		✓		
IDELTA		✓		✓		✓		
KTYPB[1]	01	03	02	03	01	03	02	03
KTIMB	✓				✓			
KVARB			✓				✓	
KWRDB		✓	✓	✓		✓	✓	✓
XVALB			✓				✓	
IDELTB		✓	✓	✓		✓	✓	✓
XGO			✓	✓			✓	✓

CHECKS

INTRY = 01, ITIME ≠ 0
INTRY = 00, ITIME = 0
ICNTG = 8 - 11, XGO ≠ 0

---

[1] All possible combinations of KTYPA and KTYPB are allowed. For brevity these are not presented here.

Summary of options

	SINGLE EVENT CARDS					
ITYPE	1	1	1	1	1	always contains a 1
IVAR	*	*	*	*	*	contains one of fifteen variables
INTRY	1-99	00	00	00	00	always filled in
IWRD	.	.	.	.	.	always filled in
ICNTG		01	02	03	04	blank or 01-04
ITIME		X				filled in if ICNTG = 01
IVARC			*		*	filled in if ICNTG = 02 or 04
IWRDC			.	.	.	filled in if ICNTG = 2, 3, 4
XVACL						filled in if ICNTG = 2,4
IDELT			±001 ±481	±001 ±481	±001 ±481	filled in (optional) if ICNTG = 2-4

* 01 education (01-05)
02 F.T. Employment (01-31)
03 Part time Employment (01-31)
04 Part time education (01-11)
06 Other full time activities (01-11)
08 Wife's education (01-07)
09 Wife's Occupation (01-23)
10 Household Composition (01-18)
11 Income adequacy (01-05)
12 Home Details (01-11)
13 Where Living (01-09)
17 Marital Status (01-05)
21 Public Support (01-08)
27 Children (01-08)
37 Birth Control (01-06)

Listing of LIFE.FOR

```
C----------------------------------------------------------------------*
C     FETCH -- PROGRAM TO RETRIEVE SOCIAL ACCOUNTS LIFE HISTORY DATA.  *
C     REVISED JULY, 1976, FOR IBM /370                                 *
C     VERSION C, FEBRUARY 1977                                         *
C----------------------------------------------------------------------*
      COMMON/CONFMT/FXT(128)
      DIMENSION X(2335),STATIC(73),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
     * ,IVAR(99),ITYPE(99),INTRY(99),IWRD(99),ICNTG(99),ITIME(99),
     * IVARC(99),IWRDC(99),XVALC(99),KTYPA(99),KTIMA(99),KVARA(99),
     * KWRDA(99),XVALA(99),KTYPB(99),KTIMB(99),KVARB(99),KWRDB(99),
     * XVALB(99),IDELT(99),IDELTA(99),IDELTB(99),INVERT(37),
     * Y(200),IY(200),FMT(160),FMTOUT(40),ISTAT(78),IMINOR(99)
     * ,XXSTAT(74)
      EQUIVALENCE (STATIC,XXSTAT)
      DIMENSION IWRDNO(15)
      COMMON/CONSTT/X,LOCI,LOCJ,LOCK,LOCL,XXSTAT,INVERT,KTYPA
      DATA IWRDNO/8,11,7,7,31,31,5,8,6,18,23,5,8,11,9/
C     INTEGER IWRDNO(15)/8,11,7,7,31,31,5,8,6,18,23,5,8,11,9/,
C     *         NERROR/0/,NRCRED/0/,NRCWRT/0/,NSTAT/0/,NMINOR/0/
C     INTEGER LETTRI/(I (/
C----------------------------------------------------------------------*
C     STATIC CONTAINS ALL DATA OBTAINED AT ONE TIME POINT ONLY         *
C     X CONTAINS ALL ENTRIES, ALL VARIABLES                            *
C     LOCI CONTAINS THE VARIABLE NUMBER                                *
C     LOCJ CONTAINS THE NUMBER OF ENTRIES                              *
C     LOCK CONTAINS THE STARTING POSITION WITHIN THE X ARRAY           *
C     LOCL CONTAINS THE NUMBER OF WORDS PER ENTRY FOR THIS VARIABLE    *
C     FMTOUT CONTAINS THE OUTPUT RECORD FORMAT                         *
C     FMT CONTAINS THE VARIABLE FORMAT DESCRIPTION OF THE DATA IN ARRAY*
C       X. THIS IS OBTAINED FROM THE FIRST OF EACH RESPONDENT(S PAIR OF*
C       RECORDS.                                                       *
C       FXT REPLACES FMT IN THE REVISION FOR /370                      *UW1150
C     INVERT MAPS THE VARIABLE NUMBER TO THE ORDINAL NUMBER OF         *
C       THE VARIABLE WITHIN THE DATA RECORD                            *
C     IWRDNO CONTAINS = OF FIELDS WITHIN EACH MAJOR VARIABLE           *
C----------------------------------------------------------------------*
C     INTEGER INUNIT/10/,MAXBLK/5181/                                   UW1150
C     INTEGER FIXED/971/,SYSIN/7/,BUFFRS/2/,LAB/0/,REW/1/               UW1150
      BUFRS=1                                                           UW11500
C      CALL OPENA(MAXBLK,MAXBLK,SYSIN,BUFFRS,LAB,REW)                    UW1150
      READ(5,2) NFMTCD,NSTTCD,N15CD,NMINCD,KTAPE,IFORM,NCASE
    2 FORMAT(2(I1,1X),I2,2(1XI1),1XA1,1XI4)
      WRITE(6,10) NSTTCD,N15CD,NMINCD,NFMTCD,NCASE,KTAPE,IFORM
   10 FORMAT(' LIFE HISTORY RETRIEVAL VERSION B APRIL 1976 NLK/JHU'/24X,
     * 'REVISED JULY 1976 FOR IBM 370'/24X,'VERSION C FEBRUARY 1977 DZF'
     * //'ONUMBER OF STATIC CARDS = ',I1/
     * ' NUMBER OF MAJOR VARIABLE CARDS =',I2/
     * ' NUMBER OF MINOR VARIABLE CARDS = ',I1/
     * ' NUMBER OF FORMAT CARDS = ',I1/
     * ' NUMBER OF CASES = ',I4/
     * ' OUTPUT DEVICE = ',I1/
     * ' OUTPUT FORMAT IS ',A1)
      IF(NSTTCD.LE.2) GO TO 20
      WRITE(6,988) NSTTCD
  988 FORMAT(' TOO MANY STATIC CONTROL CARDS SPECIFIED - ',I1)
      NERROR=NERROR+1
   20 IF(NMINCD.LE.3) GO TO 21
```

```
      WRITE(6,989) NMINCD
  989 FORMAT(' TOO MANY MINOR VARIABLE CONTROL CARDS SPECIFIED - ',I1)
      NERROR=NERROR+1
   21 IF(NFMTCD.EQ.1.OR.NFMTCD.EQ.2) GO TO 22
      WRITE(6,990) NFMTCD
  990 FORMAT(' ILLEGAL = OF FORMAT DARDS SPECIFIED - ',A1)
      NERROR=NERROR+1
      GO TO 23
   22 ITEMP=16*NFMTCD
      READ(5,3) (FMTOUT(I),I=1,ITEMP)
    3 FORMAT(16 A5)
      WRITE(6,11) (FMTOUT(I),I=1,ITEMP)
   11 FORMAT('0OUTPUT FORMAT AS FOLLOWS'//(1X16A5))
   23 IF(NSTTCD.EQ.0) GO TO 24
      DO 50 J=1,NSTTCD
      N=NSTAT+1
      NEND=N+38
      READ(5,6) ITEMP,(ISTAT(I),I=N,NEND)
    6 FORMAT(40I2)
   50 NSTAT=NSTAT+ITEMP
      WRITE(6,7) NSTAT,(ISTAT(I),I=1,NSTAT)
    7 FORMAT('0',I2,' STATIC REQUESTS'/(1X,39I3))
   24 IF(N15CD) 25,250,26
   25 WRITE(6,986)
  986 FORMAT(' ILLEGAL = OF MAJOR VARIABLE CARDS')
      NERROR=NERROR+1
      GO TO 250
   26 WRITE(6,12)
   12 FORMAT('0MAJOR VARIABLE REQUESTS')
      DO 100 J=1,N15CD
      READ(5,4) ITYPE(J),IVAR(J),INTRY(J),IWRD(J),ICNTG(J),ITIME(J),
     *IVARC(J),IWRDC(J),XVALC(J),IDELT(J),KTYPA(J),KTIMA(J),KVARA(J),
     *KWRDA(J),XVALA(J),IDELTA(J),KTYPB(J),KTIMB(J),KVARB(J),
     *KWRDB(J),XVALB(J),IDELTB(J)
    4 FORMAT(I1,3I2,3(I2,I4,2I2,F8.2,I4))
      IF((ITYPE(J).NE.4.AND.ITYPE(J).NE.5).OR.J.EQ.N15CD) GO TO 100
      WRITE(6,998)
  998 FORMAT(' TYPE 4 OR 5 MUST BE LAST MAJOR VARIABLE CARD')
      NERROR=NERROR+1
  100 WRITE(6,5) ITYPE(J),IVAR(J),INTRY(J),IWRD(J),ICNTG(J),
     *ITIME(J),IVARC(J),IWRDC(J),XVALC(J),
     *IDELT(J),KTYPA(J),KTIMA(J),KVARA(J),KWRDA(J),XVALA(J),
     *IDELTA(J),KTYPB(J),KTIMB(J),KVARB(J),KWRDB(J),XVALB(J),IDELTB(J)
    5 FORMAT(1X,4I5,3(4I5,F8.2,I5))
      IF(NMINCD.EQ.0) GO TO 170
   27 DO 150 J=1,NMINCD
      MAP=1+(J-1)*33
      MUPOF=MAP+32
      READ(5,8) ITEMP,(IMINOR(I),I=MAP,MUPOF)
    8 FORMAT(I2,11(2I2,I3))
  150 NMINOR=NMINOR+ITEMP
      LMINOR=NMINOR
      NEND=3*NMINOR
      WRITE(6,9) NMINOR,(IMINOR(I),I=1,NEND)
    9 FORMAT('0',I2,' MINOR VARIABLE REQUESTS'/(1X,12(2I3,I4)))
      REWIND 10
C      CALL DATETM(XXX(1,1))
      IF(KTAPE.EQ.6) GO TO 170
      KTAPE=9
      REWIND KTAPE
C----------------------------------------------------------------------*
C     CONTROL CARD VERIFICATION SECTION                                *
C----------------------------------------------------------------------*
  170 IF(NSTAT.EQ.0) GO TO 190
      DO 180 I=1,NSTAT
      ITEMP=ISTAT(I)
      IF(ITEMP.GT.0.AND.ITEMP.LE.73) GO TO 180
      WRITE(6,995) I,ITEMP
  995 FORMAT(' STATIC OPTION =',I2,' IS LT 1 OR GT 73 -',I2)
      NERROR=NERROR+1
  180 CONTINUE
  190 NOUTPT=NSTAT+NMINOR+N15CD
      IF(N15CD.EQ.0) GO TO 220
      DO 200 J=1,N15CD
      ITYP=ITYPE(J)
      IVR=IVAR(J)
      ICTG=ICNTG(J)
      IF(ITYP.LE.5.AND.ITYP.GE.1) GO TO 191
      WRITE(6,991) ITYP,J
  991 FORMAT(' INVALID ITYPE (COL 1) = ',I1,', CARD ',I2)
      NERROR=NERROR+1
  191 IF(IVR.GT.0.AND.IVR.LE.37) GO TO 192
      WRITE(6,992) IVR,J
  992 FORMAT(' INVALID IVAR (COL 2-3) =',I2,', CARD ',I2)
      NERROR=NERROR+1
      GO TO 194
  192 JJ=INVERT(IVR)
      IF(JJ.NE.0) GO TO 193
      WRITE(6,992) IVR,J
      NERROR=NERROR+1
      GO TO 194
  193 IF(ITYP.EQ.4) NOUTPT=NOUTPT+IWRDNO(JJ)-1
      IF(ITYP.EQ.5) NOUTPT=NOUTPT+2*IWRDNO(JJ)-1
      IF(IWRD(J).LE.IWRDNO(JJ)) GO TO 194
      WRITE(6,993) IWRD(J),J
  993 FORMAT(' INVALID IWRD (COL 6-7) =',I2,', CARD ',I2)
      NERROR=NERROR+1
  194 IF(.NOT.((ITYP.EQ.1.AND.(ICTG.GT.6.OR.ICTG.LT.0)).OR.((ITYP.EQ.2
     *  .OR.ITYP.EQ.3).AND.(ICTG.GT.11.OR.ICTG.LT.4)))) GO TO 200
```

```
      WRITE(6,996) ICTG,J
  996 FORMAT(' INVALID ICNTG (COL 8-9) =',I2,', CARD ',I2)
      NERROR=NERROR+1
  200 CONTINUE
  220 IF(NMINOR.EQ.0) GO TO 230
      DO 225 I=1,NMINOR
      I3=(I-1)*3+1
      ITEMP=IMINOR(I3)
      IF(ITEMP.GT.0.AND.ITEMP.LE.37) GO TO 196
      WRITE(6,994) I,ITEMP
  994 FORMAT(' INVALID MINOR VARIABLE =',I2,'=',I2)
      NERROR=NERROR+1
      GO TO 225
  196 IF(INVERT(ITEMP).NE.0) GO TO 197
      NERROR=NERROR+1
      WRITE(6,994) I,ITEMP
      GO TO 225
  197 IF(IMINOR(I3+1).LE.IWRDNO(INVERT(ITEMP))) GO TO 225
      WRITE(6,994) I,IMINOR(I3+1)
      NERROR=NERROR+1
  225 CONTINUE
C-----------------------------------------------------------------------*
C     TO CHANGE MAXINUM = OF FIELDS IN OUTPUT RECORD, INCREASE THE      *
C         DIMENSION OF Y AND IY IN THE DIMENSION STATEMENT AND ADJUST   *
C         THE FOLLOWING TEST AND MESSAGE.                               *
C-----------------------------------------------------------------------*
  230 IF(NOUTPT.LE.200) GO TO 250
      NERROR=NERROR+1
      WRITE(6,997) NOUTPT
  997 FORMAT(1X,I3,' FIELDS IN OUTPUT RECORD, MAXINUM IS 200')
  250 IF(NERROR.EQ.0) GO TO 300
      WRITE(6,999) NERROR
  999 FORMAT('0',I1,' CONTROL CARD ERRORS DETECTED'/' PROCESSING TERMINA
     *TED')
      STOP 7777
C-----------------------------------------------------------------------*
C                                                                       *
C     MAJOR LOOP                                                        *
C                                                                       *
C-----------------------------------------------------------------------*
C     NRCRED AND NRCWRT COUNT THE NUMBER OF RECORDS READ AND WRITTEN    *
C     N   = OF FIELDS IN THE ENTIRE CASE                                *
  300 DO 4000 K=1,NCASE
      NRCRED=NRCRED+1
C      CALL REDEA(INBUF,+4777)                                          UW1150
C      CALL DCODE(INBUF,FIXED)                                          UW1150
      READ(10,1) FXT,STATIC,N,(LOCI(J),LOCJ(J),LOCK(J),LOCL(J),J=1,15)
    1 FORMAT(128A5,3X,F4.0,6X,F3.0,2(4F2.0,F1.0),2F2.0,2(F3.0,2F2.0,F3.0
     *),F1.0,F2.0,1X,F3.0,F2.0,2F3.0,2(1X,F3.0),F1.0,1X,F2.0,2X,2(F3.0,
     *2F2.0),F2.0,2(F2.0,F1.0),2F3.0,2F1.0,2F3.0,F1.0,5F2.0,F1.0,F2.0,
     *11F1.0,1X,F2.0,2F3.0,2(1X,F3.0),12X,I4,15(2I2,I4,I2))
      N=N-1
C     CONVERT CHARACTERS IN FORMAT STATEMENT                            *
C      CALL NEWFMT
C      CALL REDEA(INBUF,+4777)                                          UW115
C      CALL DCODE(INBUF,MAXBLK)                                         UW115
```

```
      READ(10,FXT)(X(I),I=1,M)
C-----------------------------------------------------------------------*
C     VARIABLES COMMON TO ALL ROUTINESO                                 *
C        J COUNTS CONTROL CARDS, UP TO N15CD                            *
C        JJ IS THE (MAJOR) VARIABLE =                                   *
C        K COUNTS SUBJECT CASES (=NRCRED), UP TO NCASE                  *
C        M = OF FIELDS TO BE PREFIXED                                   *
C        L = OF FIELDS IN OUTPUT RECORD TILL THIS STEP                  *
C     IF ENTRY OCCURRENCE TOO HI OR INTRY=99, USE LAST ENTRY            *
C-----------------------------------------------------------------------*
C                                                                       *
C     MINOR LOOPS                                                       *
C                                                                       *
C-----------------------------------------------------------------------*
      IF(NSTAT.EQ.0) GO TO 401
      DO 400 I=1,NSTAT
  400 Y(I)=STATIC(ISTAT(I))
  401 L=NSTAT
      IF(N15CD.EQ.0) GO TO 4002
      DO 4001 J=1,N15CD
      ITYP=ITYPE(J)
      ICTG=ICNTG(J)
      IENTRY=INTRY(J)
      JJ=INVERT(IVAR(J))
      LOJ=LOCJ(JJ)
      LOK=LOCK(JJ)
      LOL=LOCL(JJ)
      IF(ITYP.NE.1.OR.IENTRY.EQ.0) GO TO 1509
      IF(IENTRY.GT.LOJ.OR.IENTRY.EQ.99) IENTRY=LOJ
      L=L+1
 2308 INDEX=LOK+(IENTRY-1)*LOL+IWRD(J)-1
      Y(L)=X(INDEX)
      GO TO 4001
 1509 IF(ITYP.EQ.1) GO TO 2200
      IF(ITYP.EQ.2.OR.ITYP.EQ.3) GO TO 2300
      IF(ITYP.EQ.5) GO TO 2600
C-----------------------------------------------------------------------*
C                                                                       *
C     ITYPE=4                                                           *
C                                                                       *
C-----------------------------------------------------------------------*
C     VARIABLE DESCRIPTION                                              *
C        LOJ   = OF ENTRIES, MAJOR VARIABLE                             *
C        LOK   LOCATION OF FIRST FIELD, MAJOR VARIBLE                   *
C        LOL   = OF FIELDS, MAJOR VARIABLE                              *
C        KLOJ  COUNTS THE ENTRIES, UP TO LOJ                            *
C        KLOL  COUNTS THE FIELDS, UP TO LOL                             *
C        NMINOR = OF COTEMPORANEOUSLY CONTINGENT REQUESTS               *
C        I     COUNTS THE COTEMP. CONT. REQUEST, UP TO NMINOR           *
C        13    POINTS TO THE COTEMP. CONT. REQUEST                      *
```

```
C----------------------------------------------------------------------*
C     FETCH -- PROGRAM TO RETRIEVE SOCIAL ACCOUNTS LIFE HISTORY DATA.  *
C     REVISED JULY, 1976, FOR IBM /370                                  *
C     VERSION C, FEBRUARY 1977                                          *
C----------------------------------------------------------------------*
      COMMON/CONFMT/FXT(128)
      DIMENSION X(2335),STATIC(73),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
     * ,IVAR(99),ITYPE(99),INTRY(99),IWRD(99),ICNTG(99),ITIME(99),
     * IVARC(99),IWRDC(99),XVALC(99),KTYPA(99),KTIMA(99),KVARA(99),
     * KWRDA(99),XVALA(99),KTYPB(99),KTIMB(99),KVARB(99),KWRDB(99),
     * XVALB(99),IDELT(99),IDELTA(99),IDELTB(99),INVERT(37),
     * Y(200),IY(200),FMT(160),FMTOUT(40),ISTAT(78),IMINOR(99)
     * ,XXSTAT(74)
      EQUIVALENCE (STATIC,XXSTAT)
      DIMENSION IWRDNO(15)
      COMMON/CONSTT/X,LOCI,LOCJ,LOCK,LOCL,XXSTAT,INVERT,KTYPA
      DATA IWRDNO/8,11,7,7,31,31,5,8,6,18,23,5,8,11,9/
C     INTEGER IWRDNO(15)/8,11,7,7,31,31,5,8,6,18,23,5,8,11,9/,
C    *         NERROR/0/,NRCRED/0/,NRCWRT/0/,NSTAT/0/,NMINOR/0/
C     INTEGER LETTRI/'I '/
C----------------------------------------------------------------------*
C     STATIC CONTAINS ALL DATA OBTAINED AT ONE TIME POINT ONLY          *
C     X CONTAINS ALL ENTRIES, ALL VARIABLES                             *
C     LOCI CONTAINS THE VARIABLE NUMBER                                 *
C     LOCJ CONTAINS THE NUMBER OF ENTRIES                               *
C     LOCK CONTAINS THE STARTING POSITION WITHIN THE X ARRAY            *
C     LOCL CONTAINS THE NUMBER OF WORDS PER ENTRY FOR THIS VARIABLE     *
C     FMTOUT CONTAINS THE OUTPUT RECORD FORMAT                          *
C     FMT CONTAINS THE VARIABLE FORMAT DESCRIPTION OF THE DATA IN ARRAY*
C       X. THIS IS OBTAINED FROM THE FIRST OF EACH RESPONDENT(S PAIR OF*
C       RECORDS.                                                       *
C       FXT REPLACES FMT IN THE REVISION FOR /370                      *UW1150
C     INVERT MAPS THE VARIABLE NUMBER TO THE ORDINAL NUMBER OF          *
C       THE VARIABLE WITHIN THE DATA RECORD                            *
C     IWRDNO CONTAINS = OF FIELDS WITHIN EACH MAJOR VARIABLE            *
C----------------------------------------------------------------------*
C     INTEGER INUNIT/10/,MAXBLK/5181/                                   UW1150
C     INTEGER FIXED/971/,SYSIN/7/,BUFFRS/2/,LAB/0/,REW/1/               UW1150
      BUFRS=1                                                           UW1150
C      CALL OPENA(MAXBLK,MAXBLK,SYSIN,BUFFRS,LAB,REW)                   UW115
      READ(5,2) NFMTCD,NSTTCD,N15CD,NMINCD,KTAPE,IFORM,NCASE
    2 FORMAT(2(I1,1X),I2,2(1XI1),1XA1,1XI4)
      WRITE(6,10) NSTTCD,N15CD,NMINCD,NFMTCD,NCASE,KTAPE,IFORM
   10 FORMAT(' LIFE HISTORY RETRIEVAL VERSION B APRIL 1976 NLK/JHU'/24X,
     * 'REVISED JULY 1976 FOR IBM 370'/24X,'VERSION C FEBRUARY 1977 DZF'
     * //'ONUMBER OF STATIC CARDS = ',I1/
     * ' NUMBER OF MAJOR VARIABLE CARDS =',I2/
     * ' NUMBER OF MINOR VARIABLE CARDS = ',I1/
     * ' NUMBER OF FORMAT CARDS = ',I1/
     * ' NUMBER OF CASES = ',I4/
     * ' OUTPUT DEVICE = ',I1/
     *   OUTPUT FORMAT IS ',A1)
      IF(NSTTCD.LE.2) GO TO 20
      WRITE(6,988) NSTTCD
  988 FORMAT(' TOO MANY STATIC CONTROL CARDS SPECIFIED - ',I1)
      NERROR=NERROR+1
   20 IF(NMINCD.LE.5) GO TO 21
```

```
      WRITE(6,989) NMINCD
  989 FORMAT(' TOO MANY MINOR VARIABLE CONTROL CARDS SPECIFIED - ',I1)
      NERROR=NERROR+1
   21 IF(NFMTCD.EQ.1.OR.NFMTCD.EQ.2) GO TO 22
      WRITE(6,990) NFMTCD
  990 FORMAT(' ILLEGAL = OF FORMAT DARDS SPECIFIED - ',A1)
      NERROR=NERROR+1
      GO TO 23
   22 ITEMP=16*NFMTCD
      READ(5,3) (FMTOUT(I),I=1,ITEMP)
    3 FORMAT(16 A5)
      WRITE(6,11) (FMTOUT(I),I=1,ITEMP)
   11 FORMAT('0OUTPUT FORMAT AS FOLLOWS'//(1X16A5))
   23 IF(NSTTCD.EQ.0) GO TO 24
      DO 50 J=1,NSTTCD
      N=NSTAT+1
      NEND=N+38
      READ(5,6) ITEMP,(ISTAT(I),I=N,NEND)
    6 FORMAT(40I2)
   50 NSTAT=NSTAT+ITEMP
      WRITE(6,7) NSTAT,(ISTAT(I),I=1,NSTAT)
    7 FORMAT('0',I2,' STATIC REQUESTS'/(1X,39I3))
   24 IF(N15CD) 25,250,26
   25 WRITE(6,986)
  986 FORMAT(' ILLEGAL = OF MAJOR VARIABLE CARDS')
      NERROR=NERROR+1
      GO TO 250
   26 WRITE(6,12)
   12 FORMAT('0MAJOR VARIABLE REQUESTS')
      DO 100 J=1,N15CD
      READ(5,4) ITYPE(J),IVAR(J),INTRY(J),IWRD(J),ICNTG(J),ITIME(J),
     *IVARC(J),IWRDC(J),XVALC(J),IDELT(J),KTYPA(J),KTIMA(J),KVARA(J),
     *KWRDA(J),XVALA(J),IDELTA(J),KTYPB(J),KTIMB(J),KVARB(J),
     *KWRDB(J),XVALB(J),IDELTB(J)
    4 FORMAT(I1,3I2,3(I2,I4,2I2,F8.2,I4))
      IF((ITYPE(J).NE.4.AND.ITYPE(J).NE.5).OR.J.EQ.N15CD) GO TO 100
      WRITE(6,998)
  998 FORMAT(' TYPE 4 OR 5 MUST BE LAST MAJOR VARIABLE CARD')
      NERROR=NERROR+1
  100 WRITE(6,5) ITYPE(J),IVAR(J),INTRY(J),IWRD(J),ICNTG(J),
     *ITIME(J),IVARC(J),IWRDC(J),XVALC(J),
     *IDELT(J),KTYPA(J),KTIMA(J),KVARA(J),KWRDA(J),XVALA(J),
     *IDELTA(J),KTYPB(J),KTIMB(J),KVARB(J),KWRDB(J),XVALB(J),IDELTB(J)
    5 FORMAT(1X,4I5,3(4I5,F8.2,I5))
      IF(NMINCD.EQ.0) GO TO 170
   27 DO 150 J=1,NMINCD
      MAP=1+(J-1)*33
      MUFOP=MAP+32
      READ(5,8) ITEMP,(IMINOR(I),I=MAP,MUFOP)
    8 FORMAT(I2,11(2I2,I3))
  150 NMINOR=NMINOR+ITEMP
      LMINOR=NMINOR
      NEND=3*NMINOR
      WRITE(6,9) NMINOR,(IMINOR(I),I=1,NEND)
    9 FORMAT('0',I2,' MINOR VARIABLE REQUESTS'/(1X,12(2I3,I4)))
      REWIND 10
C      CALL DATETM(XXX(1,1))
      IF(KTAPE.EQ.6) GO TO 170
      KTAPE=9
      REWIND KTAPE
C-----------------------------------------------------------------------*
C     CONTROL CARD VERIFICATION SECTION                                 *
C-----------------------------------------------------------------------*
  170 IF(NSTAT.EQ.0) GO TO 190
      DO 180 I=1,NSTAT
      ITEMP=ISTAT(I)
      IF(ITEMP.GT.0.AND.ITEMP.LE.73) GO TO 180
      WRITE(6,995) I,ITEMP
  995 FORMAT(' STATIC OPTION =',I2,' IS LT 1 OR GT 73 -',I2)
      NERROR=NERROR+1
  180 CONTINUE
  190 NOUTPT=NSTAT+NMINOR+N15CD
      IF(N15CD.EQ.0) GO TO 220
      DO 200 J=1,N15CD
      ITYP=ITYPE(J)
      IVR=IVAR(J)
      ICTG=ICNTG(J)
      IF(ITYP.LE.5.AND.ITYP.GE.1) GO TO 191
      WRITE(6,991) ITYP,J
  991 FORMAT(' INVALID ITYPE (COL 1) = ',I1,', CARD ',I2)
      NERROR=NERROR+1
  191 IF(IVR.GT.0.AND.IVR.LE.37) GO TO 192
      WRITE(6,992) IVR,J
  992 FORMAT(' INVALID IVAR (COL 2-3) =',I2,', CARD ',I2)
      NERROR=NERROR+1
      GO TO 194
  192 JJ=INVERT(IVR)
      IF(JJ.NE.0) GO TO 193
      WRITE(6,992) IVR,J
      NERROR=NERROR+1
      GO TO 194
  193 IF(ITYP.EQ.4) NOUTPT=NOUTPT+IWRDNO(JJ)-1
      IF(ITYP.EQ.5) NOUTPT=NOUTPT+2*IWRDNO(JJ)-1
      IF(IWRD(J).LE.IWRDNO(JJ)) GO TO 194
      WRITE(6,993) IWRD(J),JJ
  993 FORMAT(' INVALID IWRD (COL 6-7) =',I2,', CARD ',I2)
      NERROR=NERROR+1
  194 IF(.NOT.((ITYP.EQ.1.AND.(ICTG.GT.6.OR.ICTG.LT.0)).OR.((ITYP.EQ.2
     *   .OR.ITYP.EQ.3).AND.(ICTG.GT.11.OR.ICTG.LT.4)))) GO TO 200
```

```
 4704      IF(X(JWRD).EQ.XVALC(J)) ICUM=ICUM+1
      GO TO 4800
 4705 IF(X(JWRD).NE.XVALC(J)) ICUM=ICUM+1
      GO TO 4800
 4706 IF(X(JWRD).GT.XVALC(J)) ICUM=ICUM+1
      GO TO 4800
 4707 IF(X(JWRD).LT.XVALC(J)) ICUM=ICUM+1
      GO TO 4800
 4708 IF(X(JWRD).EQ.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+1
      GO TO 4800
 4709 IF(X(JWRD).NE.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+1
      GO TO 4800
 4710 IF(X(JWRD).GT.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+1
      GO TO 4800
C-----------------------------------------------------------------------*
 4711 IF(X(JWRD).LT.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+1
      GO TO 4800
C     ITYPE=3                                                           *
 4703      GO TO (4714,4715,4716,4717,4718,4719,4720,4721) IICTG
      STOP 4713
 4718 IF(X(JWRD).EQ.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+LTMB-LTMA
      GO TO 4800
 4719 IF(X(JWRD).NE.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+LTMB-LTMA
      GOTO 4800
 4720 IF(X(JWRD).GT.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+LTMB-LTMA
      GO TO 4800
 4721 IF(X(JWRD).LT.XVALC(J).AND.LIMEX.GE.IITM)ICUM=ICUM+LTMB-LTMA
      GO TO 4800
C     ICNTG=4                                                           *
 4714      IF(X(JWRD).EQ.XVALC(J)) ICUM=ICUM+LTMB-LTMA
      GO TO 4800
 4715 IF(X(JWRD).NE.XVALC(J)) ICUM=ICUM+LTMB-LTMA
      GO TO 4800
 4716 IF(X(JWRD).GT.XVALC(J)) ICUM=ICUM+LTMB-LTMA
      GO TO 4800
 4717 IF(X(JWRD).LT.XVALC(J)) ICUM=ICUM+LTMB-LTMA
 4800 CONTINUE
 4812      L=L+1
      Y(L)=ICUM
 4001 CONTINUE
 4002 NRCWRT=NRCWRT+1
      IF(IFORM.EQ.LETTER) GO TO 4003
      WRITE(KTAPE,FMTOUT)(Y(I),I=1,L)
      GO TO 4000
47      NTIME=ITIME(J)
      NVAR=IVAR(J)
      NWRD=IWRD(J)
      IS=0
      CALL VALUE(J,ICTG,NTIME,NVAR,NWRD,XVAL,JTIME,IS)
      XVALC(J)=XVAL
C      THIS PART OF THE PT
      GO TO 48
 4003 DO 4004 I=1,L
 4004 IY(I)=Y(I)
```

```
      WRITE(KTAPE,FMTOUT)(IY(I),I=1,L)
 4000 CONTINUE
      IF(KTAPE.NE.6) ENDFILE KTAPE
 4777 WRITE(6,2991) NRCRED,NRCWRT
 2991 FORMAT(///'ONUMBER OF RECORDS READ =',I4///'ONUMBER OF RECORDS WRI
     *TTEN =',I5/////)
C       CALL DATETM(XXX(1,2))
      WRITE(6,2992)
 2992 FORMAT('OEND OF JOB')
      STOP 100
      END
      BLOCK DATA
      DIMENSION X(2335),STATIC(74),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
      DIMENSION INVERT(37),KTYPA(99)
      COMMON/COMSTT/X,LOCI,LOCJ,LOCK,LOCL,STATIC,INVERT,KTYPA
      DATA INVERT/1,5,6,2,0,3,0,4,11,10,12,14,15,0,0,0,7,0,0,0,13,0,0,0,
     *              0,0,8,0,0,0,0,0,0,0,0,0,9/
      END
      SUBROUTINE MONTH(J,NCNTG,NTIME,NVAR,NWRD,XVAL,JTIME,IS)
      DIMENSION X(2335),STATIC(74),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
      DIMENSION INVERT(37),KTYPA(99)
      COMMON/COMSTT/X,LOCI,LOCJ,LOCK,LOCL,STATIC,INVERT,KTYPA
C----------------------------------------------------------------------*
C     SUBROUTINE MONTH RETURNS A MONTH VALUE IN THE LAST ARGUMENT IN   *
C     THE CALLING SEQUENCE.  THIS IS FOUND EITHER BY DIRECT RETRIEVAL  *
C     OF A DATE OR BY THE OCCURRENCE OF A SPECIFIC EVENT.              *
C----------------------------------------------------------------------*
C     FIRST DETERMINE IF TIME IS DIRECT OR INDIRECT                    *
      IF(NCNTG.EQ.2) GO TO 3000
      IF(NCNTG.EQ.3) GO TO 2500
      IF(NCNTG.EQ.4.OR.NCNTG.EQ.5) GO TO 2700
C     NCNTG=1   DIRECT TIME                                            *
      IF(NCNTG.EQ.6)GO TO 3000
      CALL TIME(JTIME,NTIME,IS)
 3900 JTIME=JTIME+IS
      IF(KTYPA(J).LT.0) STATIC(74)=JTIME
      RETURN
C     NCNTG=2   INDIRECT TIME                                          *
```

```
 2500 JTIME=IFIX(STATIC(NWRD))
      GO TO 3900
C     NCNTG=3   INDIRECT TIME                                              *
 3000 IF(NVAR.LE.0.OR.NVAR.GT.37) GO TO 3504
      KK=INVERT(NVAR)
      IF(KK.EQ.9) GO TO 3504
 3004 LOJ=LOCJ(KK)
      LOK=LOCK(KK)
      LOL=LOCL(KK)
      IF(NCNTG.EQ.6) GO TO 7802
      IF(NCNTG.GE.4) GO TO 8001
 7802       DO 3005 KLOJ=1,LOJ
      JWRD=LOK+(KLOJ-1)*LOL+NWRD-1
      IF(X(JWRD).NE.XVAL) GO TO 3005
      MON1PT=LOK+(KLOJ-1)*LOL+1
      JTIME=X(MON1PT)
      GO TO 3900
 3005 CONTINUE
      RETURN
 3504 WRITE(6,3502) NVAR,J
 3502 FORMAT(' INVALID IVARC, KVARA, OR KVARB =',I2,', CARD ',I2)
      STOP 200
 2700 IF(NTIME.GE.7000.AND.NTIME.LE.7481) GO TO 2701
      IF(NTIME.GE.8000.AND.NTIME.LE.8481) GO TO 2801
      IF(NTIME.GE.9000.AND.NTIME.LE.9481) GO TO 2901
      STOP
 2701 DUR=NTIME-7000
      XDUR=1.
      G 0 TO 3000
 2801 DUR=NTIME-8000
      XDUR=2.
      GO TO 3000
 2901 DUR=NTIME-9000
      XDUR=3.
      GO TO 3000
 8001 DO 8005 KLOJ=1,LOJ
      MON1PT=LOK+(KLOJ-1)*LOL+1
      XTIME=X(MON1PT+1)-X(MON1PT)
      JTIME=-1
            JJTIME=-1
      IF(XTIME.LT.DUR.AND. XDUR.EQ.1.) JTIME=X(MON1PT)
      IF(XTIME.EQ.DUR.AND.XDUR.EQ.2.) JTIME=X(MON1PT)
      IF(XTIME.GT.DUR.AND.XDUR.EQ.3.) JTIME=X(MON1PT)
      IF(JTIME.LT.0) GO TO 8005
      IF(NCNTG.EQ.4) GO TO 3900
      JWRD=LOK+(KLOJ-1)*LOL+NWRD-1
      KTYPAX=ABS(KTYPA(J))
      IF(KTYPAX.EQ.1.AND.X(JWRD).LT.XVAL) JJTIME=X(MON1PT)
      IF(KTYPAX.EQ.2.AND.X(JWRD).EQ.XVAL) JJTIME=X(MON1PT)
      IF(KTYPAX.EQ.3.AND.X(JWRD).GT.XVAL) JJTIME=X(MON1PT)
      IF(JTIME.EQ.JJTIME) GO TO 3900
 8005 CONTINUE
      RETURN
      END
/*
      SUBROUTINE VALUE(J,NCNTG,NTIME,NVAR,NWRD,XVAL,JTIME,IS)
      DIMENSION X(2335),STATIC(74),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
      DIMENSION INVERT(37),KTYPA(99)
      COMMON/CONSTT/X,LOCI,LOCJ,LOCK,LOCL,STATIC,INVERT,KTYPA
C       SUBROUTINE VALUE RETURNS THE VALUE OF IWRD, IVAL AT TIME
C       NTIME INTO XVAL FOR USE IN SUBSEQUENT CALL TO MONTH SUBRTN
C
      JS=0
      CALL  TIME(JTIME,NTIME,JS)
      IF(NVAR.LE.0.OR.NVAR.GT.37) GO TO 9504
      KK=INVERT(NVAR)
      IF(KK.EQ.9) GO TO 9504
      LOJ=LOCJ(KK)
      LOK=LOCK(KK)
      LOL=LOCL(KK)
      XVAL=-1.
      DO 9005 KLOJ=1,LOJ
      JWRD=LOK+(KLOJ-1)*LOL+NWRD-1
      MONIPT=LOK+(KLOJ-1)*LOL+1
      IF(JTIME.GT.IFIX(X(MONIPT+1)).OR.JTIME.LT.IFIX(X(MONIPT)))GO TO
     *9005
      XVAL=X(JWRD)
      GO TO 9308
 9005 CONTINUE
 9308 RETURN
 9504 STOP 500
      END
      SUBROUTINE TIME(JTIME,NTIME,IS)
      DIMENSION X(2335),STATIC(74),LOCI(15),LOCJ(15),LOCK(15),LOCL(15)
      DIMENSION INVERT(37),KTYPA(99)
      COMMON/CONSTT/X,LOCI,LOCJ,LOCK,LOCL,STATIC,INVERT,KTYPA
 2000 IF(NTIME.GT.9900) GO TO 2300
      IF(NTIME.GT.0.AND.NTIME.LT.482) GO TO 2200
      IF(NTIME.GT.1928.AND.NTIME.LT.1970) GO TO 2100
C 3009      WRITE(6,3008) NTIME,J
C 3008 FORMAT(' INVALID ITIME, KTIMA, OR KTIMB =',I4,', CARD ',I2)
      JTIME=481
      GO TO 3900
 2100 JTIME=(NTIME-1929)*12+1
      GO TO 3900
 2200 JTIME=NTIME
      GO TO 3900
 2300 JTIME=(NTIME-9900)*12+IFIX(STATIC(28))
3900        RETURN
      END
```

Appendix B

NOTE:

There are two versions of the data tape, designated here version A and version B. The LIFE.FOR program operates with version B. In the documentation which follows, the format for this tape is referred to as the format for TAPE B.

Life History Data Tapes

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Static Information

Tape B		Tape A		
Word	Format	CC	Contents	Codes
		1-2	Deck number	01
01	F4.0	3-6	ID number	as given
		7-12	Segment number	as given
02	F3.0	13-15	Date left home	as given
03	F2.0	16-17	Age	as given
04	F2.0	18-19	Birthdate	year
05	F2.0	20-21		month
06	F2.0	22-23		day
07	F1.0	24	Type of service	0 never (cc 25-80 blank) 1 one period of active military 2 career military 3 more than one period of non-career military
08	F2.0	25-26	Date of start of active service	Year
09	F2.0	27-28		Month
10	F2.0	29-30	Discharge date	Year
11	F2.0	31-32		Month
12	F1.0	33	Drafted/enlisted	0 drafted 1 enlisted, except a) reserves b) National Guard 2 enlisted active reserves or Nat'l. Guard
13	F2.0	34-35	Entering rank	List of entering ranks in notes

14	F2.0	36-37	Final discharge rank	
15	F3.0	38-40	Location of place where R was stationed the longest	city/town (see placename coding in notes
16	F2.0	41-24	State	
17	F2.0	43-44	SEA	for placename coding see notes
18	F3.0	45-47	County	
19	F3.0	48-50	Location of place where R was discharged	city/town
20	F2.0	51-52	State	
21	F2.0	53-54	SEA	for placename coding see notes
22	F3.0	55-57	County	
23	F1.0	58	Military diploma/degree/course	0 degree oriented program whether R completed requirements and received a "legitimate" degree or not. 1 non-degree education, or education leading to a certificate
24	F2.0	59-60	Degree or highest grade completed	62 G.E.D. or high school certificate 13 one year college 14 two years college 15 three years college 66 college degree
		61	Blank	
25	F3.0	62-64	Date of entry into labor force	
26	F2.0	65-66	Total number of siblings	
27	F3.0	67-69	Date of first marriage	

28	F3.0	70-72	Calendar month of birth	
29	F3.0	74-76	Calendar month of entry into military	
30	F3.0	78-80	Calendar month of discharge from military	
31	F1.0	1	Race of respondent	1 White 2 Black 3 Mexican-American 4 Puerto Rican 5 Chinese 6 Japanese 7 American Indian 8 Other 9 No Answer
		2	Deck number	2
32	F2.0	3-4	Adjusted verbal ability test score	Add the following to positions 69-70 (word 69): 2 if 8-10 NA's 1 if 4-7 NA's 0 if less than 4 NA's 9 if c 67= 3, 4 or 6 (word 68)
		5-6	Blank	
33	F3.0	7-9	Place of birth	city/town
34	F2.0	10-11	State	
35	F2.0	12-13	SEA	see placename coding
36	F3.0	14-16	County	

37	F2.0	17-18	Year of entry to U.S.	As given. If born in U.S., leave blank	
38	F2.0	19-20	Number of siblings (including step-siblings)	brothers, 00 = none	
39	F2.0	21-22		sisters, 00 = none	
40	F2.0	23-24	Father's or substitute's education	00	no education
				01	first grade
				02	second grade
				03	third grade
				04	fourth grade
				05	fifth grade
				06	sixth grade
				07	seventh grade
				58	grammar school diploma
				09	ninth grade or jr. high diploma
				10	tenth grade
				11	eleventh grade or 12th grade with no diploma
				62	high school diploma
				13	one year college
				14	two years college and R.M.
				64	junior college degree
				15	three years college
				16	four years college (no degree)
				66	college degree
				17	MA, MS program (no degree)

				67 MA, MS degree (also M.B.A.)
				18 PhD, etc. program (no degree)
				68 PhD, etc. degree
				19 post-doctoral work
				20 professional program (no degree)
				70 professional degree
				81 some vocational training
41	F1.0	25	Education for whom?	1 father
				2 stepfather, foster father
				3 uncle
				4 grandfather
				5 other
				9 no father or substitute
42	F2.0	26-27	Mother's education	Same as cc 23-24 above
43	F1.0	28	Education for whom?	1 mother
				2 stepmother, foster mother
				3 aunt
				4 grandmother
				5 other
				9 no mother or substitute
44	F3.0	29-31	Father's occupation	1960 Census code
45	F3.0	32-34	industry	1960 Census code

46	F1.0	35	Self-employed/owner	1 self-employed 2 owner 3 tenant 4 sharecropper Blank=not applicable
47	F1.0	36	Occupation of whom?	1 father 2 stepfather, foster father 3 uncle 4 grandfather 5 other 9 no father or father substitute known
48	F3.0	37-39	Mother's occupation	1960 Census code
49	F3.0	40-42	industry	1960 Census code 993993 = housewife (i.e., didn't work) 999999 = occ/ind unknown
50	F1.0	43	Family happiness	1 very happy 2 somewhat happy 3 somewhat unhappy 4 very unhappy
51	F2.0	44-45	Mother's nationality	see notes
52	F2.0	46-47	Father's nationality	see notes
53	F2.0	48-49	Religion of origin	see religion code in notes
54	F2.0	50-51	Religion changed to	00 no change in religion
55	F2.0	52-53	Year of change (if cc 50-51 = 00	As given, otherwise in cc 53
56	F1.0	54	For whom voted in last presidential election?	0 did not vote 1 Nixon

				2 Humphrey
				3 Wallace
				4 Gregory and Cleaver
				5 other
				9 never voted
57	F1.0	54	Year of first vote	As given
Verbal Ability				
58	F1.0	57	space	As given
59	F1.0	58	broaden	As given
60	F1.0	59	caprice	As given
61	F1.0	60	edible	As given
62	F1.0	61	animosity	As given
63	F1.0	62	pact	As given
64	F1.0	63	cloistered	As given
65	F1.0	64	emanate	As given
66	F1.0	65	accustom	As given
67	F1.0	66	allusion	As given
68	F1.0	67	Who read words?	1 R read words himself
				2 Interviewer read words to R
				3 Telephone interview
				4 Interpreter used
				5 $5.00
				6 $5.00 and telephone
69	F2.0	69-70	Numbers of correct answers to verbal ability score	As given
70	F3.0	71-73	Prestige score for father's OCC/IND (NORC scores)	As given

71	F3.0	74-76	Prestige score for mother's OCC/IND (NORC scores)	As given
72	F3.0	78-80	Date of 1st full time job after last leaving full time education	
73	F3.0	82-84	Date of last leaving full time education	

Notes:

(a) If there is more than one period of active service, the first period is coded under static information and the second under variable 06, other full-time activities. The entering rank of the first period and the discharge rank of the second are coded in static information.

(b) If there are more than six years of continuous military service, respondent is coded as career military.

(c) If there are more than two periods of military, only those periods of six or more years are considered to be career military.

(d) If never any active military service, cc 25-80, words 8-30 are blank.

(e) If R takes more than one type of military education, priority is given to the highest academic type.

(f) If no military education, 000 is coded in cc 58-60, words 23 and 24.

(g) If cc 58=0, the same codes are used as for word 40 cc 23-24 (see page 4).

(h) If cc 58=1, the code categories on p. 2 are used.

If a range was given as a response (e.g., "8 or 10 years"), the lower limit (i.e., 8 years) is taken.

Military Ranks

Two columns have been assigned for entering rank and two columns for discharge rank. The first column of each pair indicates the Service and the second the rank.

Navy and Coast Guard

11	Seaman Recruit
12	Seaman Apprentice
13	Seaman
14	Petty Officer, 3rd class
15	Petty Officer, 2nd class
16	Petty Officer, 1st class, 'E-5'
17	Chief Petty Officer
18	Senior Chief Petty Officer
19	Master Chief Petty Officer
51	Warrant Officer
52	Chief Warrant Officer, 'W-2'
53	Chief Warrant Officer, 'W-3'
54	Chief Warrant Officer, 'w-4'
55	Ensign
56	Lieutenant Junior Grade
57	Lieutenant
58	Lieutenant Commander
59	Commander

Marines

21	Private
22	Private First Class
23	Lance Corporal
24	Corporal
25	Sergeant
26	Staff Sergeant
27	Gunnery Sergeant
28	1st Sergeant or 'MSGT'
29	Sergeant Major
61	Warrant Officer
62	Chief Warrant Officer, 'W-2'
63	Chief Warrant Officer, 'W-3'
64	Chief Warrant Officer, 'W-4'
65	Second Lieutenant
66	First Lieutenant
67	Captain
68	Major
69	Lieutenant Colonel

Army and National Guard

31	Private, 'E-1'
32	Private, 'E-2'
33	Pvt. First Class
34	Corporal, 'Specialist 4'
35	Sergeant, 'Specialist 5'
36	Staff Sergeant, 'Specialist 6'
37	Sergeant 1st Class, 'Specialist 7'
38	1st Sergeant, 'MSGT'
39	Sergeant Major
71	Warrant Officer
72	Chief Warrant Officer, 'W-2'
73	Chief Warrant Officer, 'W-3'
74	Chief Warrant Officer, 'W-4'
75	Second Lieutenant
76	First Lieutenant
77	Captain
78	Major
79	Lieutenant Colonel

Air Force

41	Airman
42	Airman, 3rd class
43	Airman, 2nd class
44	Airman, 1st class
45	Staff Sergeant
46	Technical Sergeant
47	Master Sergeant
48	Senior Master Sergeant
49	Chief Master Sergeant
81	Warrant Officer
82	Chief Warrant Officer, 'W-2'
83	Chief Warrant Officer, 'W-3'
84	Chief Warrant Officer, 'W-4'
85	Second Lieutenant
86	Lieutenant
87	Captain
88	Major
89	Lieutenant Colonel

STATE CODES

These codes apply to Birthplace,
Military Location and
Residence

Code	State	Code	State	Code	State
01	ALABAMA	18	KENTUCKY	35	NORTH DAKOTA
02	ALASKA	19	LOUISIANA	36	OHIO
03	ARIZONA	20	MAINE	37	OKLAHOMA
04	ARKANSAS	21	MARYLAND	38	OREGON
05	CALIFORNIA	22	MASSACHUSETTS	39	PENNSYLVANIA
06	COLORADO	23	MICHIGAN	40	RHODE ISLAND
07	CONNECTICUT	24	MINNESOTA	41	SOUTH CAROLINA
08	DELAWARE	25	MISSISSIPPI	42	SOUTH DAKOTA
09	DIST. OF COLUMBIA	26	MISSOURI	43	TENNESSEE
10	FLORIDA	27	MONTANA	44	TEXAS
11	GEORGIA	28	NEBRASKA	45	UTAH
12	HAWAII	29	NEVADA	46	VERMONT
13	IDAHO	30	NEW HAMPSHIRE	47	VIRGINIA
14	ILLINOIS	31	NEW JERSEY	48	WASHINGTON
15	INDIANA	32	NEW MEXICO	49	WEST VIRGINIA
16	IOWA	33	NEW YORK	50	WISCONSIN
17	KANSAS	34	NORTH CAROLINA	51	WYOMING

SPECIAL AND FOREIGN LOCATION CODES*

*These codes apply to Birthplace
Military Locations and
Residence

The first three digits are entered in "city" column; the next two in "state."

SPECIAL

Code	Description
777 77	Travel in U.S.
666 77	Travel outside U.S.
666 66	At sea for long period

FOREIGN

Code	Country
--- 60	North America
001 --	Canada
008 --	Cuba
010 --	Haiti
006 --	Iceland
011 --	Jamaica
003 --	Mexico
004 --	Newfoundland
005 --	Panama
002 --	Puerto Rico
007 --	El Salvador
009 --	Trinidad
--- 65	South America
005 --	Argentina
001 --	Brazil
007 --	British Honduras
004 --	Chile
006 --	Nicaragua
002 --	Peru
003 --	West Indies
--- 70	Europe
003 --	Austria
016 --	Azore Islands
001 --	England
012 --	Finland
007 --	France
002 --	Germany
005 --	Greece
004 --	Holland
008 --	Italy

Code	Country
--- 70	Europe (cont.)
006 --	Mediterranean
011 --	Norway
014 --	Poland
010 --	Rumania
015 --	Spain
013 --	Ukraine
--- 75	Asia
001 --	Australia
009 --	China
010 --	Eniwetok Atoll
004 --	Formosa
006 --	Guam
002 --	Japan
003 --	Korea
008 --	Marianas Islands
012 --	Pakistan
005 --	Phillippines
011 --	Thailand
007 --	Viet Nam
--- 80	Mid-East
001 --	Egypt
003 --	Israel
004 --	Jordan
002 --	Turkey
--- 85	Africa
003 --	Ethiopia
004 --	Ghana
001 --	Morocco
002 --	Nigeria

NATIONALITY CODES

Code	Name
01	Africa
02	Albania
03	America (United States)
04	American Indian
05	Armenia
06	Asia, not otherwise coded
07	Australia
08	Austria
09	Belgium (Belgian)
10	Bulgaria
11	Canada, French
12	Canada, other
13	Central America
14	China (Chinese)
15	Cuba
16	Czechoslovakia (Czech, Slovaks)
17	Denmark (Danish)
18	England (English)
19	Estonia
20	Europe, not otherwise coded
21	Finland (Finnish)
22	France (French)
23	Germany (German, Penna. Dutch)
24	Greece (Greek)
25	Hungary (Hungarian)
26	India

Code	Name
27	Ireland (Irish)
28	Italy (Italian)
29	Japan (Japanese)
30	Jewish, no country specified
31	Latvia
32	Lithuania
33	Mexico (Mexican)
34	Netherlands (Dutch)
35	Norway (Norwegian)
36	Poland (Polish)
37	Portugal (Portuguese)
38	Puerto Rico (Puerto Rican)
39	Rumania
40	Russia (U.S.S.R.)
41	Scotland (Scotch)
52	Scotch-Irish
42	South America
43	Spain (Spanish)
44	Sweden (Swedish)
45	Switzerland (Swiss)
46	Syria
47	Turkey
48	Wales (Welsh)
49	West Indies, not otherwise coded
50	Yugoslavia (Yugoslavs)
51	Other

RELIGION CODES

Code	Name
01	Adventists (Seventh-Day)
02	Agnostic
03	Atheist
04	Armenian Church of America
05	Assembly of God
06	Baptish (except Southern Baptist)
07	Brethren (German Baptist)
08	Buddist
09	Christian, no other information
10	Church of God in Christ
11	Church of the Nazarene
12	Churches of Christ
13	Churches of God
14	Congregational Christian Churches
15	Disciples of Christ (International Convention of Christian Churches)
16	Episcopalian (Protestant Episcopal Church)
17	Evangelical United Bretheran Church
18	Friends (Quakers)
19	Greek Orthodox
20	Independent Fundamental Churches of America
21	Jehovah's Witness
22	Jewish
23	Latter-Day Saints (Mormons)
24	Lutheran
25	Mennonite (including Amish)
26	Methodist (if not specified below)
27	African Methodist Episcopal
28	African Methodist Episcopal Zion Church
29	Christian Methodist Episcopal Church
30	The Methodist Church
31	Moslem (including Muslim)
32	Pentecostal Church
33	Polish National Catholic Church
34	Presbyterian Church
35	Protestant, Denomination not given
36	Catholic
37	Russian Orthodox
38	Salvation Army
39	Southern Baptist (not Baptist)
40	Spiritualist
41	Unitarian Universalist
42	United Church of Christ
44	Christian Reformed Church
45	Reformed Church in America
46	Christian Science
47	Holiness Church
70	Other
43	No religion, indifferent

Husband's Education

Variable 01

Husband's Education: Variable 01

Tape B		Tape A		
Word	Format	CC	Content	Codes
01	F2.0		01	
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F1.0	1	Past type of school	0 military 1 elementary school 2 high school 3 post high school vocational and alike 4 college 5 professional school 6 graduate school 7 post graduate school 8 other (tutoring, TV, etc.) 9 no answer
05	F1.0	2	Current type of school	As in 1, if not in school, blank
06	F1.0	3	Past educational activity	0 not in school 1 in full-time education 3 in part-time, degree oriented 4 in military education, non degree oriented 5 in part-time, non degree oriented 6 in military education, degree oriented
07	F1.0	4	Current educational activity	Same codes as word 6, cc 3
08	F1.0	5	Attainment	0 less than grade school diploma 1 grade school diploma

2 some high school

3 high school diploma

4 post-high school, vocational and alike--only if high school diploma previously attained

5 some college

6 college degree

7 M.A., some graduate school Ph.D. program and professional

8 Ph.D. and professional degree

9 missing data

Note:

Entries coded from age 14 on.

Full Time Employment

Variable 02

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Full Time Employment: Variable 02

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		02	
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F3.0	2-4	NORC prestige score for full-time OCC/IND (R's)	As given
	4X	7-8	Variable number	02
05	F1.0	9	Never any full-time employment	0 never (cc 10-63 blank)
				1 not 0, 3, 5, or 6
				3 various similar jobs in this period (or union assigned jobs)
				5 career military
				6 career military (dates of rank changes estimated)
06	F4.0	10-11	When job began (or periods of unemployment of military service	Year
		12-13		Month
07	F3.0	14-16	Occupation	1960 Census code
08	F3.0	17-19	Industry	1960 Census code
		14-19	Military	000000
			Career military where xy=rank	055-xy
			Unemployment	900900 on B Tape +00+00 on A Tape
09	F1.0	20	Self-employed, owner, etc.	1 self-employed
				2 owner
				3 tenant
				4 sharecropper
				Blank = not applicable

10	F7.2	21-27	Starting wages	As given
11	F1.0	28	Wages estimated?	0 no
				1 yes
12	F1.0	29	Time-units of wages	1 hourly
				2 daily
				3 weekly
				4 semimonthly
				5 monthly
				6 yearly
				7 academic year
				8 seasonal, summer (3 months)
13	F1.0	30	Wages in kind	1 food only (F)
				2 housing only (H)
				3 both
				4 other
				Blank = not applicable
14	F2.0	31-32	Hours per week	As given
15	F1.0	33	Estimate or overtime?	1 estimate of hours
				2 includes overtime but hours not estimated
				3 both overtime and estimate of hours
				4 working dates estimated (takes precedence over 1, 2, and 3)
				Blank = not applicable or none of the above
16	F4.0	34-35	When job ended	Year
		36-37		Month
17	F7.2	38-44	Ending wages (or current wages)	Same as cc 21-27
18	F1.0	45	Wages estimated?	0 no
				1 yes

19	F1.0	46	Time-units of wages (ending)	Same as cc 29, word 12
20	F1.0	47	Wages in kind (ending)	Same as cc 30, word 13
21	F2.0	48-49	Hours per week (ending)	Same as cc 31-32, word 14
22	F1.0	50	Estimate or overtime?	Same as cc 33, word 15
23	F1.0	51	Employer	1 same as employer of last coded full-time job (ignore military & unemployment) 2 not 1 but previously employed full-time by same employer 3 not 1 or 2, but previously employed part time by same employer 4 other
24	F1.0	52	Upon leaving job	0 own decision (D) 1 not own decision (N) 2 not applicable: a) entered service b) promotion c) continuing seasonal employment (e.g. teacher's summer employment)
25	F1.0	53	At termination of job	1 H = had new job 2 K = knew of job 3 N = neither and did not enter military 4 return to full-time education 5 entered military service 6 not applicable a) present job b) promotion c) continuing seasonal employment
26	F1.0	54	Got job through	1 FR = friends 2 FA = family 3 PU = public agency 4 PR = private agency

				5 A = ads 6 0 = other
27	F1.0	55	On-the-job training?	0 not for this job 1 yes
28	F2.0	56-57	Number of time units of on-the-job training	0 not for this 1 yes
29	F1.0	58	Type of time units	1 hours 2 days 3 weeks 4 months Blank = not applicable
30	F2.0	59-60	Type of on-the job training	01 apprenticeship 02 formal management training 03 other formal training 04 informal and type not specified
31	F3.0	61-63	Union name	

Notes:

(a) Periods of unemployment and military service are also coded here (with blanks in "not applicable" columns as noted below).

(b) A number of the items coded for full-time employment are applicable to only a few of the cases. In order to avoid inserting no answer codes endlessly for the "not applicable" cases, 'blank' has been assigned as legitimate in the columns noted below:

(word 09)	20	self-employment/ownership
(word 13)	30	wages-in-kind (starting)
(word 15)	33	overtime/estimate of hours/wk (starting)
(word 20)	47	wages in kind (ending)
(word 22)	50	overtime/estimate of hours/wk (ending)

(c) Periods of "unemployment" and "active military service" are also coded with blanks:

unemployment: Tape A:
cc 20-33 and 38-80 always blank except continuation cc 64 and when dates estimated.

Tape B:
Words 9-15 and 17-31 are blank.

military: Tape A:
cc 20-33 and 38-80 always blank except continuation cc 64.

Tape B:
Words 9-15 and 17-31 are always blank.

(d) If career military, cc 17-19 = rank, word 08.

(e) The last two columns of starting and ending wages are for cents.

(f) If R gives a range of hours for number of hours worked, the midpoint is taken and fractions rounded to the nearest even number; cc 33 is coded '1' for 'estimated'.

(g) Starting and ending wages are transformed as of July 1969. Wages have been converted to a common time unit called a month.

(h) For job currently held '6901' is entered as the date.

(i) Foreign unions are coded '9'.

Part Time Employment

Variable 03

Part Time Employment: Variable 03

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		03	
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F3.0	2-4	NORC prestige score for part-time OCC/IND (R's)	As given
	4X	7-8	Variable number	03
05	F1.0	9	Never any part-time employment?	0 never (cc 10-63 blank) 1 not 0 or 3 3 various similar jobs in this period (or union assigned jobs)
06	F4.0	10-11	When job began	Year
		12-13		Month
07	F3.0	14-16	Occupation	1960 Census code
08	F3.0	17-19	Industry	1960 Census code
09	F1.0	20	Self-employed/ owner, etc.	1 self-employed 2 owner 3 tenant 4 sharecropper Blank = not applicable
10	F7.2	21-27	Starting wages	As given
11	F1.0	28	Wages estimated?	0 no 1 yes
12	F1.0	29	Time-units of wages	1 hourly 2 daily 3 weekly 4 semimonthly 5 monthly 6 yearly

				7 academic year
				8 seasonal, summer (3 months)
13	F1.0	30	Wages in kind	1 food only (F)
				2 housing only (H)
				3 both
				4 other
				Blank = not applicable
14	F2.0	31-32	Hours per week	As given
15	F1.0	33	Estimate or overtime?	1 estimate of hours
				2 includes overtime but hours not estimated
				3 both overtime and estimate of hours
				4 working dates estimated (takes precedence over 1, 2, and 3)
				Blank = not applicable or none of the above
16	F4.0	34-35	When job ended	Year
		36-37		Month
17	F7.2	38-44	Ending wages (or current wage) (Transformed)	Same as cc 21-27
18	F1.0	45	Wages estimated?	0 no
				1 yes
19	F1.0	46	Time-units of wages (ending)	Same as cc 29, word 12
20	F1.0	47	Wages in kind (ending)	Same as cc 30, word 12
21	F2.0	48-49	Hours per week (ending)	Same as cc 31-32, word 14
22	F1.0	50	Estimate or overtime?	Same as cc 33, word 15
23	F1.0	51	Employer	1 same as employer of last coded part-time job (ignore military & unemployment)

				2	not 1, but previously employed part-time by same employer
24-30			Not used	3	not 1 or 2 but previously employed full-time by same employer
				4	other
		52-60	Blank		
31	F2.0	61-63	Union		Listing under variable 2

Notes:

(a) All of the instructions which apply to codesheet three (full-time employment), columns 9-51 are applicable here. For convenience, these instructions are repeated below.

(b) A number of the items coded for part-time employment are applicable to only a few of the cases. In order to avoid inserting 'F' endlessly for the "not applicable" cases, 'blank' has been assigned as legitimate in the columns noted below:

20	self-employment/ownership
30	wages-in-kind (starting)
33	overtime/estimate of hours/wk (starting)
47	wages-in-kind (ending)
50	overtime/estimate of hours/wk (ending)

(c) Last two columns (26-27) are for cents.

Husband's Part Time Education

Variable 04

Husband's Part Time Education: Variable 04

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		04	
02	F4.0		Date 1	
03	F4.0		Date 2	
		1-2	Variable number	02
04	F1.0	3	Never any part-time education?	0 never (cc 30-47 Blank) 1 on each card otherwise
05	F4.0	4-5	When courses began	Year
		6-7		Month
06	F4.0	8-9	When courses ended	Year
		10-11		Month
	3X	12-14	Blank	
07	F1.0	15	Number of schools attended	1, 2, etc.
08	F2.0	16-17	Type of school or program	01 elementary
				02 junior high school
				03 high school, public, vocational, grade
				04 high, public (other) or high school, private
				06 post high school vocational or technical training
				07 junior college, two-year
				08 four-year college
				09 professional school, law
				10 professional school, medicine
				11 professional school, business administration
				12 professional school, other
				13 graduate school

				14	post-doctoral program
				20	institutionalized education
09	F1.0	18	Degree/diploma/course	0	Degree oriented program whether R completed requirements and received a "legitimate" degree or not
				1	Non-degree education or education leading to various certificates
10	F2.0	19-20	Degree or highest grade completed	62	high school diploma
				13	one year college
				14	two years college
				64	junior college degree
				15	three years college
				16	four years college, no degree
				66	college degree
				17	MA, MS, MBA program (no degree)
				67	MA, MS, MBA degree
				18	PhD, etc. program (no degree)
				68	PhD, etc. degree
				19	post-doctoral work
				20	professional program (no degree)
				70	professional degree
11	F1.0	21	Tuition paid by?	1	R (self)
				2	E (employer)
				3	O (other, government)
				4	O (other, unspecified)

Notes:

(a) Career military education in an institution is coded under part-time education.

(b) If column 18 (Word 9) = 0, use the same codes as found under full-time education. The most likely to occur are given above.

(c) If column 18 (Word 9) = 1, the code categories under full-time education, military codes are used.

Other Full Time Activities

Variable 06

Other Full Time Activities: Variable 06

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		06	Variable number
02	F4.0		Date 1	
03	F4.0	24-25	Date 2	
04	F1.0	26	Never any full-time activities?	0 never 1 otherwise
05	F4.0	27-28	When activity started	Year
		29-30		Month
06	F4.0	31-32	When activity ended	Year
		33-34		Month
07	F2.0	35-36	Type of activity	01 illness, physical or unspecified 02 illness, mental 03 travel while unemployed 04 prison 05 loafing, i.e. not looking for work 06 additional military 07 foreign military service 08 summer military training 09 on strike 10 travel or research grant 25 missionary work (full-time)

Wife's Education

Variable 08

Wife's Education: Variable 08

TAPE B

Word	Format	CC	Content	Codes
01	F2.0	39-40	Variable number	08
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F1.0	41	Never married?	0 = never 1 otherwise
05	F4.0	42-43	Marriage date or date for ending of wife's education past marriage date (for each wife)	Year
		44-45		Month
06	F2.0	46-47	Highest grade/ degree	Codes given under full-time education, variable 01
07	F1.0	48	Wife number	1, 2, 3, etc.

Note:

(a) Initial entry is always date of marriage (for each wife).

Wife's Occupation

Variable 09

Wife's Occupation: Variable 09

TAPE B

Word	Format	CC	Contents	Codes
01	F2.0		Variable number	09
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F3.0	2-4	NORC prestige score for OCC/ IND (wife's)	As given
	4X	7-8	Variable number	
05	F1.0	9	Respondent never married?	0 never 1 otherwise
06	F4.0	10-11	When job began (or marriage date if always housewife)	Year
		12-13		Month
07	F3.0	14-16	Occupation	1960 Census code
08	F3.0	17-19	Industry	1960 Census code
09	F1.0	20	Self-employed, owner, etc.	1 self-employed 2 owner 3 tenant 4 sharecropper 9 not applicable
10	F7.2	21-27	Starting wages	As given
11	F1.0	28	Wages estimated?	0 no 1 yes
12	F1.0	29	Time-units of wages	1 hourly 2 daily 3 weekly 4 semimonthly 5 monthly 6 yearly 7 academic year 8 seasonal, summer (3 months)

13	F1.0	30	Wages in kind	1 food only (F) 2 housing only (H) 3 both 4 other 9 not applicable
14	F2.0	31-32	Hours per week	As given
15	F1.0	33	Estimate or overtime?	1 estimate of hours 2 includes overtime but not estimate 3 both overtime and estimate of hours 4 working dates estimated (takes precedence over 1, 2, or 3)
16	F4.0	34-35	When job ended (or termination date of marriage or 6901 if housewife)	Year
		36-37		Month
17	F7.2	38-44	Ending wages (or current wage)	Same as cc 21-27, word 10
18	F1.0	45	Wages estimated?	0 no 1 yes
19	F1.0	46	Time-units of wages (ending)	Same as cc 29, word 12
20	F1.0	47	Wages in kind (ending)	Same as cc 30, word 13
21	F2.0	48-49	Hours per week (ending)	Same as cc 31-32, word 14
22	F1.0	50	Estimate or overtime?	Same as cc 33, word 15
23	F1.0	51	Wife number	1, 2, etc.

Notes:

(a) If wife never worked, date of marriage is coded in cc 10-13, and 993993 (housewife) in cc 14-19 for occupation and industry; the same "not applicable" blanks are used for periods of unemployment. Intervals between wife's work are not coded as "unemployment" or "housewife" if she worked at all since marriage. In such cases, only the periods of employment are coded. If R's spouse never worked, in cc 34-37 (when job ended) either the date of the marriage's termination (if more than one wife or if marriage ended in some other way) OR the date 6901 is entered. For "housewife", cc 20-33 and cc 38-50 are always blank.

A number of the items coded for "wife's employment" are applicable to only a few of the cases. Therefore 'blank' has been assigned as legitimate for the columns below:

Word	CC	
9	20	self-employment/ownership
13	30	wages-in-kind (starting)
15	33	overtime/estimate of hours/wk (starting)
20	47	wages-in-kind (ending)
22	50	overtime/estimate of hours/wk (ending)

(b) Wages are transformed (price adjusted) and expressed in dollars and cents per month.

(c) If R gives a range of hours, the midpoint is taken and fractions rounded to nearest even number; 'estimate' is given for cc 33, word 15.

(d) For current job 6901 is entered in cc 34-37, word 16. For current job Date 2, word 3 will equal 0481.

Household Composition: Variable 10

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		Variable number	10
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F2.0		Household composition type	See codes below
05	F4.0	43-44	Date of change in composition	Year
		45-46		Month
6-17	12F2.0	47-70	Household composition (left justify)*	See codes below
18	F2.0	71-72	Number of persons excluding R	00 alone 98 group living of indeterminate size 99 household composition while career military

Note:

(a) Initial entry is for respondent at age 14.

(b) The number of words used depends upon the number of persons specified in Word 18. For example, if there are three persons in the household, words 6, 7, and 8 would contain their code and words 9-18 would be blank.

Household Composition Types

Abbreviations

Fa = Father
Ma = Mother
GP = Grandfather
GM = Grandmother
Sbs = Brothers and/or Sisters [Number and sex not taken into account]
K = Respondent's children [Number and sex not taken into account]
W = Wife
Un = Uncle
Au = Aunt
Co = Cousins [one or more]
Nf = Nephew [R's or wife's]
Nc = Niece [R's or wife's]

FK = foster child
FaIn = Father-in-law
MaIn = Mother-in-law
SbsIn = Brother-in-laws and/or Sister-in-laws [Number and sex not taken into account]

SK = Stepchildren [either sex, any number]
M = Mistress
MK = Mistress' children [either sex, any number]

Code	Household Members
01	Alone
02	Fa
03	Ma
04	Fa + Ma
05	Fa + Ma + GM + GP
06	Fa + Ma + [GP or GM]
08	Fa + Ma + GM + GP + Sbs
09	Fa + Ma + [GB +/or GP] + [Au +/or Un] + Sbs
11	Fa + Ma + GM + Sbs + [Nf +/or Nc]
12	Fa + Ma + [GM +/or GP] + K
13	Fa + Ma + [GM +/or GP] + [Au +/or Un] + Co + Sbs
14	Fa + Ma + [GM +/or GP] + Sbs

Code	Household Members
16	Fa + Ma + W
17	Fa + Ma + W +[K +/or SK]
18	Fa + Ma + W + Sbs
19	Fa + Ma + W + K + [Au +/or Un] [+ or w/o Co]
15	Fa + Ma + W + [K or SK or FK] + Sbs
20	Fa + Ma + W + Sbs + [Nf +/or Nc] [+ or w/o K]
21	Fa + Ma + W + SbsIn + [Nf +/or Nc] [+ or w/o K]
22	Fa + Ma + [Au +/or Un]
23	Fa + Ma + [Au +/or Un] + Sbs
24	Fa + Ma + [Au +/or Un] + Co + Sbs
25	Fa + Ma + [SbsIn and/or Nf or Nc] + Sbs
26	Fa + Ma + Sbs + Unrelated Indiv
27	Fa + Ma + Sbs + Step-Sbs
28	Fa + Ma + Sbs + K
29	Fa + Ma + Sbs + K + M
30	Fa + Ma + [K or MK]
31	[Fa or Step-Fa] + [Step-Ma or Ma] + [Sbs or Co] + W + K
32	[Fa or Step-Fa] + [Step-Ma or Ma] + W + K
33	[Fa or Step-Fa] + [Step-Ma or Ma] + W
34	[Fa or Step-Fa] + [Step-Ma or Ma] + [Sbs and/or Step-Sbs or Co]
40	Fa + [GP or GM] [+ or w/o Sbs]
42	Fa + Sbs
43	Fa + K
46	[Fa or Ma] + [Au + Un] [+ or w/o Co] [+ or w/o Sbs]
47	Fa + [Inlaws] + Sbs [+ or w/o Nf and/or Nc]
48	[Fa or Ma] + Sbs + unrelated individual
35	[Fa or GF] + GM + W + [Au + Un]
41	[Fa or Ma] + W
46	[Fa or Ma] + W + [K or SK]
37	[Fa or Ma] + W + Sbs
38	[Fa or Ma] + W + Sbs + K
39	[Fa or Ma] + W + [Nc or Nf] [+ or w/o Sbs] [+ or w/o K]
61	[Fa or Ma] + W + Inlaws [+ or w/o K]
95	[GM or GF] + [Au +/or Un] [+ or w/o sbs] [+ or w/o K] [+ or w/o Nf and Nc]
96	[GM or GF] + Co [+ or w/o Au or Un] [+ or w/o Sbs]
07	[Au or Un] [+ or w/o Co] [+ or w/o Sbs]
00	[Au + Un] [+ or w/o Nf or Nc]

Code	Household Composition
49	Ma or Step-Ma
50	Ma + Step-Fa
51	Ma + Step-Fa + [GP +/or GM]
52	Ma + Step-Fa + [GP +/or GM] + Sbs
53	Ma + others
54	Ma + [GP +/or GM] + [Au +/or Un] + Co + Sbs
55	Ma + [GP +/or GM] + Sbs + W [+ or w/o K]
56	Ma + Sbs
57	Ma + K or Step-K
58	Ma + K + Sbs
44	Ma + [Au +/or Un] [+ or w/o Co + Sbs]
45	Ma + [FaIn + MaIn] + K and/or SK
60	Ma + SbsIn +/or [Nf +/or Nc] [+ or w/o Sbs]
59	Ma + [Nf +/or Nc] [+ or w/o Sbs]
41	Ma or Step-Ma + W
36	Ma or Step-Ma + W + K
64	Ma + W + Sbs
61	Ma + Sbs +W + [MaIn +/or FaIn]
62	Sbs
63	K
65	Sbs + K
66	Co
71	M + MK or K
72	W
73	W + K
74	W + [SK or FK] + K
75	W + Sbs [+ or w/o K]
76	W + [FaIn +/or MaIn] [+ or w/o K]
77	W + SbsIn [+ or w/o K] [+ or w/o Nc +/or Nf]
78	W + [Nc +/or Nf] [+ or w/o K] [+ or w/o Sbs]
80	W + Co [+ or w/o K]
81	W + SbsIn + Sbs + or w/o [Nc +/or Nf] [+ or w/o K]
82	W + [Nc +/or Nf] + Co
84	W + FaIn + MaIn + SbsIn [+ or w/o Sbs] [+ or w/o K] + or w/o [Au +/or Un]

Code	Household Composition
83	SbsIn + [Nc +/or Nf] [+ or w/o Sbs]
85	W + FaIn + [Nf +/or Nc]
86	W + FaIn + K [+ or w/o SbsIn]
87	W + MaIn + K
88	W + MaIn + K + [Nf +/or Nc]
89	W + MaIn + [Sbs or SbsIn] + K
90	W + MaIn
91	W + FaIn
92	W + [Au +/or Un] + or w/o [Nc or Nf] + or w/o K
93	W + [Au +/or Un] + or w/o SbsIn + or w/o Co + or w/o K
94	GM + or w/o Sbs
97	W + [GM +/or GP] + or w/o K + or w/o Grandchild
67	Roommate
68	Member of family unit not related to R [R lvg with a family]
69	Unrelated individual lvg with R's family
98	Institution (exc. Military; e.g. prison, hospital, etc.)
99	Armed Forces

Income Adequacy: Variable 11

TAPE B

Word	Format	CC	Contents	Codes
01	F2.0	7-8	Variable number	11
02	F4.0		Date 1	
03	F4.0		Date 2	
		1-2	Card number	01, 02, etc.
		3-6	ID number	As given
04	F4.0	9-10	Date of adequacy change	Year
		11-12		Month
05	F1.0	13	Type of adequacy	1 S = save
				2 C = comfort, no save
				3 M = manage
				4 D = need outside help

Note:

(a) First entry is at R's age 14.

Home Details: Variable 12

TAPE B

Word	Format	CC	Contents	Codes
01	F2.0	32-33	Variable number	12
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F4.0	34-35	When moved into dwelling unit	Year
		36-37		Month
05	F2.0	38-39	Type of housing	See codes below
06	F2.0	40-41	Number of rooms	
07	F1.0	42	Own, rent	1 own 2 rent 3 share without paying rent 4 housing part of wages
08	F1.0	43	Neighborhood composition	1 AW = all white 2 MW = mostly white 3 HH = half white 4 MNW = mostly non-white 5 ANW = all non-white 9 not applicable a) periods of military barracks b) dormitories c) hospitals d) jails e) locations outside U.S.
09	F1.0	44	Major non-white city of area	1 white (cc 43 = 1) 2 black 3 Mexican-American 4 Puerto Rican 5 Chinese

				6 Japanese 7 American Indian 8 other (logged separately) 9 N.A.
10	F1.0	45	Neighborhood composition (at departure, or during residence)	Same as cc 43-44, words 8 & 9
11	F1.0	46		Blank = no change

Notes:

(a) Initial entry is for R at age 14.

(b) Codes for Type of Housing

01	trailer, mobile house
02	house
03	duplex
04	row house
05	apartment
06	apartment hotel or residential hotel, motel
07	dormitory, fraternity house, or bunkhouse
08	rooming house
09	barracks or other military (e.g., tents, submarines, etc.)
10	other
11	housing project
12	hospital (patient)
13	jail

For career military, 70 is added to type of housing code. E.g., living in a housing project while career military is coded 81.

(c) For periods of military barracks, 9 is coded.

Where Living

Variable 13

Where Living: Variable 13

TAPE B

Word	Format	CC	Contents	Codes
01	F2.0	49-50	variable number	13
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F4.0	51-52	Date of each change of location	Year
		53-54		Month
05	F3.0	55-57	New location	city/town
06	F2.0	58-59		state/SEA/county
07	F2.0	60-61		
08	F3.0	62-64		
09	F1.0	65	Farm or career military?	1 RF = rural farm 2 RNF = rural non-farm 3 career military 9 not applicable

Notes:

(a) First entry in these columns is respondent's residence at age 14.

(b) For periods of non-career military, cc 51-54, word 04 = date of entering service; for cc 55-65, word 05 city/town = 999, state = 55, cc 60-65 words 07-09 are blank. The next entry contains the date of return to civilian life. The same is true for career military when the respondent lives in the barracks without his family.

Marital Status

Variable 17

Marital Status: Variable 17

TAPE B

Word	Format	CC	Content	Codes
01	F2.0	7-8	Card number	
02	F4.0		Date 1	
03	F4.0		Date 2	
		9-10	Date of marital status change (or current date if never married	Year
		11-12		Month
04	F1.0	13	Subsequent marital status	1 single, never married
				2 married
				3 separated
				4 divorced
				5 widowed
				6 resumed co-habitation
05	F2.0	14-15	Age of wife at marriage	As given

Note:

(a) If R was never married: cc 9-12 = date of interview

13 = 1

14 = blank

15 = 9

Public Support

Variable 21

Public Support: Variable 21

TAPE B

Word	Format	CC	Contents	Codes
01	F2.0		Variable number	21
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F1.0	18	Never any public support?	0 never (cc 19-29 blank) 1 on each card otherwise
05	F4.0	19-20	When support began	Year
		21-22		Month
06	F4.0	23-24	When support ended (or 6901 if continuing)	Year
		25-26		Month
07	F1.0	27	Amount of public support	1 A = all 2 M = more than half 3 H = half 4 L = less than half 5 N = none
08	F2.0	28-29	Type of support	See codes below

Notes:

Codes for Type of Support

01	Welfare, type unspecified
02	Unemployment Compensation (may appear as Social Security)
03	Aid to Dependent Children (ADS or AFDC)
04	G.I. Bill of Rights
05	Old Age Assistance
06	Old Age Insurance (old age pension)
07	Aid to the Blind
08	Medicare
09	NIMH, NIH, NDEA fellowships
10	V.A. pension

11	V.A. disability insurance
12	CAA (California School Aid)
13	Job training
14	Government check for loss of son killed in war
15	Other money from military
16	Workman's compensation insurance (for injury)
17	Disability insurance
18	State TB Association
19	Government Food
20	Foster care allowance
21	State aid for education
52	52/20 Club

Children

Variable 27

Children: Variable 27

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		Variable number	27
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F1.0	20	Never any children?	0 no children by any marriage (cc 21-28 blank
				1 on each card otherwise
05	F4.0	21-22	Date of change in number of children in R's household	Year
		23-24		Month
06	F1.0	25	Event	1 birth, male
				2 birth, female
				3 death, male
				4 death, female
				5 other arrival of R's son
				6 other arrival of R's daughter
				7 other departure, male
				8 other departure, female
				0 adoption, male
				9 adoption, female
07	F2.0	26-27	Number of child to which event refers	01, 02, etc.
08	F1.0	28	Marriage number	0, 1, 2, etc.

Notes:

(a) Foster children and children by wife's previous marriage excluded.

(b) A child born and dying in the same month is coded as two events having the same date. Children are numbered in the same order as first coded.

(c) A marriage number of 0 refers to R when living with his children but widowed or divorced from wife.

Birth Control

Variable 37

Birth Control: Variable 37

TAPE B

Word	Format	CC	Content	Codes
01	F2.0		Variable number	37
02	F4.0		Date 1	
03	F4.0		Date 2	
04	F1.0	33	Marriage number	0, 1, 2, etc.
05	F4.0	34-35	Date of birth control change	Year
		36-37		Month
06	F1.0	38	Birth control?	0 no 1 yes

Notes:

(a) Initial entry is date of marriage (for each marriage).

(b) If never married, cc 33 = 0, word 4 and words 5 and 6, are blank.

Composition of Life History Data Tape B

Life History Tape B is comprised of 3178 records. There are two records for each of the 1589 respondents in the survey. The first record of the pair contains the formating information for reading the data record, the second record of the pair. This format record is always 971 characters long. The first 640 positions contain the actual Fortran-type format with which the following record will be read. Positions 641-817 of the format record contain the static information, as detailed under "Static Information" below. Positions 818-970 contain variable location descriptions as described under "variable location" data below.

FORMAT	RECORD	
cc	contents	explanation
1	(	
2-3	xx	number/entries variable 01
4-22	(F2.0,2F4.0,5F1.0)	format variable 01
23-24	xx	number/entries variable 04
25-76	(F2.0,2F4.0,F1.0,2F4.0,3X, F1.0,F2.0,F1.0,F2.0,F1.0)	format variable 04
77-78	xx	number/entries variable 06
79-107	(F2.0,2F4.0,F1.0,2F4.0, F2.0)	format variable 06
108-109	xx	number/entries variable 08
110-142	(F2.0,2F4.0,F1.0,F4.0, F2.0,F1.0)	format variable 08
143-144	xx	number/entries variable 02 + 03
145-254	(F2.0,2F4.0,F3.0,4X,F1.0, 2F3.0,F1.0,F7.2,3F1.0,F2.0, F1.0,F4.0,F7.2,3F1.0,F2.0, 6F1.0,F2.0,F1.0,F2.0,F3.0)	format variable 02 + 03
255-256	xx	number/entries variable 17
257-304	(F2.0,2F4.0,F1.0,F2.0)	format variable 17
305-306	xx	number/entries variable 27
307-345	(F2.0,2F4.0,F1.0,F4.0, F1.0,F2.0,F1.0)	format variable 27
346-347	xx	number/entries variable 37
348-375	(F2.0,2F4.0,F1.0,F4.0, F1.0)	format variable 37

FORMAT	RECORD	
cc	contents	explanation
376-377	xx	number/entries variable 10
378-407	(F2.0,2F4.0,F2.0,F4.0,13 F2.0)	format variable 10
408-409	xx	number/entries variable 09
410-500	(F2.0,2F4.0,F3.0,4X,F1.0, F4.0,2F3.0,F1.0,F7.2,3F1.0, F2.0,F1.0,F4.0,F7.2,3F1.0, F2.0,2F1.0)	format variable 09
501-502	xx	number/entries variable 11
503-555	(F2.0,2F4.0,F4.0,F1.0)	format variable 11
556-557	xx	number/entries variable 21
558-561	(F2.0,2F4.0,F1.0,2F4.0, F1.0,F2.0)	format variable 21
562-563	xx	number/entries variable 12
564-603	(F2.0,2F4.0,F4.0,F2.0, F2.0,3F1.0,2F1.0)	format variable 12
604-605	xx	number/entries variable 13
606-639	(F2.0,3F4.0,F3.0,2F2.0, F3.0,F1.0)	format variable 13

STATIC DATA

640	)	
641-643	ignore	
644-647	id of this respondent	
654-656	date left home	
657-658	age respondent	
659-660	birthdate	year
661-662		month
663-664		date
665	type military	
666-667	date of start	year
668-669		month
670-671	date of discharge	year
672-673		month
674	drafted	
675-676	entering rank	

677-678	Discharge rank
679-688	Location stationed
689-698	Location discharged
699-701	Military diploma/degree
702-705	Entry into labor force date
706-707	Total number siblings
708-710	First marriage date
711-713	Birthdate
714-717	Military entry date
718-721	Military discharge date
722-722	Race
724-725	Adjusted verbal ability
728-737	Place of birth
738-739	Year of entry
740-741	Number of brothers
742-743	Number of sisters
744-745	Father's education (or substitute)
746-746	Education for whom
747-748	Mother's education (or substitute)
749-749	Education for whom
750-752	Father's occupation 1960 Census code
753-755	Father's industry 1960 Census code
756-756	Father's self employed?
757-757	Occupation for whom
758-760	Mother's occupation
761-763	Mother's industry
764-764	Family happiness
765-766	Mother's nationality
767-768	Father's nationality
769-770	Religion of origin
771-772	Religion changed to
773-774	Year of change
775-775	For whom voted last presidential
776-777	Year first vote
778-791	Verbal ability
792-794	Prestige score father's occupation
795-797	Prestige score mother's occupation

798-801	Calendar month of first full-time civilian job after leaving full-time education
802-805	Date last leaving full-time education
806-809	Calendar month entry into U.S.
810-813	Calendar month religion change
814-817	Calendar month first vote

VARIABLE LOCATOR

818-821		Total number of words of data for this R
822-823	01	Constant, variable number 01
824-825	xx	Number entries, variable 01
826-829	xxxx	Beginning word number this variable
830-831	08	Number words/entry variable 01
832-833	04	Constant, variable number 04
834-835	xx	Number entries, variable 04
836-839	xxxx	Beginning word, variable 04
840-841	11	Number words/entry variable 04
842-843	06	Constant, variable number 06
844-845	xx	Number entries, variable 06
846-849	xxxx	Beginning word, variable 06
850-851	07	Number words/entry variable 06
852-853	08	Constant, variable number 08
854-855	xx	Number entries, variable 08
856-859	xxxx	Beginning word, variable 08
860-861	07	Number words/entry variable 08
862-863	02	Constant, variable number 02
864-865	xx	Number entries, variable 02
866-869	xxxx	Beginning word, variable 02
870-871	31	Number words/entry variable 02

872-873	03	Constant, variable number 03
874-875	xx	Number entries, variable 03
876-879	xxxx	Beginning word, variable 03
880-881	31	Number words/entry variable 03
882-883	17	Constant, variable number 17
884-885	xx	Number entries, variable 17
886-889	xxxx	Beginning word, variable 17
890-891	05	Number words/entry variable 17
892-893	27	Constant, variable number 27
894-895	xx	Number entries, variable 27
896-899	xxxx	Beginning word, variable 27
900-901	08	Number words/entry variable 27
902-903	37	Constant, variable number 37
904-905	xx	Number entries, variable 37
906-909	xxxx	Beginning word, variable 37
910-911	06	Number words/entry variable 37
912-913	10	Constant, variable number 10
914-915	xx	Number entries, variable 10
916-919	xxxx	Beginning word, variable 10
920-921	18	Number words/entry variable 10
922-923	09	Constant, variable number 09
924-925	xx	Number entries, variable 09
926-929	xxxx	Beginning word, variable 09
930-931	23	Number words/entry variable 09
932-933	11	Constant, variable number 11
934-935	xx	Number entries, variable 11
936-939	xxxx	Beginning word, variable 11
940-941	05	Number words/entry variable 11

942-943	21	Constant, variable number 21
944-945	xx	Number entries, variable 21
946-949	xxxx	Beginning word, variable 21
950-951	08	Number words/entry variable 21
952-953	12	Constant, variable number 12
954-955	xx	Number entries, variable 12
956-959	xxxx	Beginning word, variable 12
960-961	11	Number words/entry variable 12
962-963	13	Constant, variable number 13
964-965	xx	Number entries, variable 13
966-969	xxxx	Beginning word, variable 13
970-971	09	Number words/entry variable 13

END FORMAT RECORD

Record number two of the format-data record pair contains the actual data for the respondent. It is a variable length record. The variables appear within the record in the order given in the description of the variable locator above. That is, the data contains entries for variables 01, 04, 06, 08, 02, 03, 17, 27, 37, 10, 09, 11, 21, 12 and 13 in that order. The precise location of a particular entry for a particular variable can be computed from the variable locator information. The retrieval program, designed to pull selected, requested information from the data record operates by consulting the variable locator data. The entire data record is read, (according to the format specified by the format record) into a single vector. The variable locator is then used to determine the position within the vector for a particular variable. To make the organization of the data tape clearer, the contents of the data record for person 0004, the second respondent on the tape are described, position-by-position below.

I. VARIABLE INFORMATION -- SAMPLE MAN

A. Variable 01 - education (1-90)

Word 1. First entry (1-15)

1 a. Variable code (1-2) = 01

2 b. Beginning date (3-16) = 096 = December 1936 - R's seventh birthday

Word

3 c. Ending date (7-10) = 185

4 d. Past type of school (11) "b̸" - none for first entry

5 e. Current type of school (12) "1" - elementary school

6 f. Past educational activity (13) "b̸" - none for first entry

7 g. Current educational activity (14) "1" - in full-time education

8 h. Attainment (15) "0" - less than grade school diploma

2. Second entry (16-30)
    - a. Variable code (15-17) = 01
    - b. Calendar month R left school (18-21) "b̸185" - May, 1944. which is the date R left one school to enter another in the fall; there is a new entry whenever the respondent changes schools, but not when he leaves school for summer vacation to return to the same school in the fall.
    - c. Ending date (22-25) = b189 = date left this school
    - d. Past type of school (26) "1" - elementary
    - e. Current type of school (27) "b̸" - R has left school
    - f. Past educational activity (28) "1" - full-time education
    - g. Current educational activity (29) "0" - not in school
    - h. Attainment (30) "1" - grade school diploma - 8th grade completed
3. Third entry (31-45)
    - a. Variable code (31-32) = 01
    - b. Calendar month R re-entered school (33-36) "b̸189"- September, 1944
    - c. Ending date (37-40) = "b245" = May, 1949
    - d. Past type of school (41) "1" - elementary school
    - e. Current type of school (42) "2" - high school
    - f. Past educational activity (43) "0" - not in school - this is for the four months between schools.
    - g. Current educational activity (44) "1" - in full-time education
    - h. Attainment (45) "2" - some high school
4. Fourth entry (46-60)
    - a. Variable code (46-47)
    - b. Calendar month beginning (48-51) = "b̸245" = May, 1949
    - c. Calendar month ending (52-55) = b301 = January, 1954
    - d. Past type of school (56) "2" - high school

        e. Current type of school (57) "ƀ" - R has left school
        f. Past educational activity (58) "1" - in full-time education
        g. Current educational activity (59) "0" - out of school
        h. Attainment (60) "3" - high school diploma

    5. Fifth entry (61-75)
        a. Variable code (61-62) = 01
        b. Calendar month R started college (63-66) "ƀ301" - January, 1954 - this corresponds to the beginning date of Var. 04 (part-time education)
        c. Ending date (67-70) = b385 = January, 1961
        d. Past type of school (71) "2" - high school
        e. Current type of school (72) "4" - college
        f. Past educational activity (73) "0" - out of school
        g. Current educational activity (74) "3" - in part-time degree-oriented education
        h. Attainment (75) "5" - some college

    6. Sixth entry (76-90)
        a. Variable code (76-77) = 01
        b. Calendar month R last left school (78-81) "ƀ385" - January, 1961
        c. Ending date (82-85) current date = b481
        d. Past type of school (86) "4" - college
        e. Current type of school (87) "ƀ" - R has left school
        f. Past educational activity (88) "3" - part-time degree-oriented education
        g. Current educational activity (89) "0" - out of school
        h. Attainment (90) "6" - college degree

B. Part-time education - Var. 04 (91-119)

Word 1. First entry (91-119) This is the only entry

1 a. Var. no. (91-92) "04" - constant for each entry

2 b. Beginning date (93-96) = "b301"

3 c. Ending date (97-100) = "b386"

4 d. Never any part-time education? (101) "1" - R has had some part-time education

5 e. When courses began

        1) Year (102-103) "54"
        2) Month (104-105) "01"

Word

6 f. When courses ended

1) Year (106-107) "61"

2) Month (108-109) "02"

7 g. Number of schools attended (113) "1"

8 h. Type of school or program (114-115) "08" - four- year college

9 i. Degree/diploma/course (116) "0" - degree-oriented program

10 j. Degree or highest grade completed (117-118) "66" - college degree

11 k. Tuition paid by? (119) "3" - government

C. Other full-time activities - Var. 06 (120-140)

Word 1. First Entry

1 a. Variable no. (120-121) "06" - constant for each entry

2 b. Beginning date (122-125)

3 c. Ending date = blank (126-129)

4 d. Never any other full-time activity? (130) "0" - never

5-7 e. Blank (131-140) because not applicable

D. Wife's Education Variable 08 (141-158)

Word 1. First entry

1 a. Variable number (141-142) "08" - constant on all entries

2 b. Beginning date (143-146) = "b281" = marriage date

3 c. Ending date (147-150) = b481 = date of survey

4 d. Never married? (151) "1" - R has been married

5 e. Marriage date or ending date for entries of wife's education past marriage date

1) Year (152-153) "52"

2) Month (154-155) "05"

6 f. Highest grade/degree (156-157) "62" - high school diploma

7 g. Wife number (158) "1" - 1st wife

E. Full-time occupation - Var. 02

Word 1. First entry (159-230) first full-time job

1 a. Variable Number (159-160) = 02

2 b. Beginning date (161-164) = b249

3 c. Ending date (165-168) = b253

4 d. Prestige score for this occ/ind (169-171) "173" - one decimal place assumed

5 e. Never any full-time employment? (176) "1" - R has worked full-time

Word

6 f. When job began - year and month (177-180) "4909" - Sept., 1949

7 g. Occupation (181-183) "985" - 1960 Census Code for general laborer

8 h. Industry (184-186) "196" - 1960 Census Code for Construction

9 i. Self-employed/owner (187) "b̸" - no

10 j. Starting wages (188-194) "0020746" - $207.46 per month - all income entries have been price-adjusted to 1959 dollars

11 k. Wages estimated? (195) "1" - yes

12 l. Time units of wages (196) "1" - hourly - this indicates the time units originally reported by R

13 m. Wages in kind (197) "b̸" - none

14 n. Hours per week (198-199) "40"

15 o. Hours estimated or include overtime? (200) "b̸" - no

16 p. When job ended - year and month (201-204) "5001" - Jan., 1950

17 q. Ending wages (205-211) "0020908" - $209.08 per month - price-adjusted to 1959 dollars

18 r. Wages estimated (212) "1" - yes

19 s. Original time units of ending wages (213) "1" - hourly

20 t. Wages in kind (ending) (214) 'b̸" - none

21 u. Hours per week (ending) (215-216) "40"

22 v. Hours estimated or include overtime? (217) "b̸" - no

23 w. Employer code (218) "4" - not employed previously by same employer

24 x. Upon leaving job (219) "1" - not own decision

25 y. At termination of job (220) "3" - did not have another job and did not enter military

26 z. Got job through (221) "6" - other means than friends, family, agency or ad

27 a.' On-the-job training? (222) "0" - not for this job

28-30 b.' Information about the training (223-227) "b̸b̸b̸b̸b̸" - not applicable

31 c.' Union name (228-230) "b̸b̸b̸" - none

2. Second entry (231) - period of unemployment

   a. Variable number (231-232) = 02

   b. Beginning date (233-236) = 253

   c. Ending date (237-240) = 256

   d. Prestige (241-243) "b̸b̸b̸" - none available for unemployment

   e. Never any full-time employment (248) "1" - R has had full-time employment

- f. When period of unemployment started (249-252) "5001" - Jan., 1950
- g. Occupation code (253-255) "900" - unemployed
- h. Industry code (256-258) "400" - unemployed
- i. Self-employed/owner (259) "b̸" - N/A
- j. Starting wages (260-266) "0000000" - R assigned zero income as opposed to blank income, which occurs when R is unable to recall his income
- k. Wages estimated? (267) "b̸" - N/A
- l. Time units of wages (268) "b̸" - N/A
- m. Wages-in-kind (269) "b̸" - N/A
- n. Hours per week (270-271) "b̸b̸" - N/A
- o. Hours estimated (272) "b̸" - N/A
- p. When period of unemployment ended (273-276) "5004" - April, 1950
- q. Ending wages (277-283) "0000000"
- r. - c.' Blank (284-302) - N/A

3. Third entry (303-374) - full-time job
   - a. Variable number (303-304) = 02
   - b. Beginning date (305-308) = 256
   - c. Ending date (309-312) = 265
   - d. Prestige (313-315) "173" - 1 decimal place assumed
   - e. Never any full-time employment? (320) "1"
   - f. When job started (321-324) "5004" - April, 1950
   - g. Occupation code (325-327) "985" - laborer
   - h. Industry code (328-330) "196" - construction
   - i. Self-employed/owner (331) "b̸" - no
   - j. Starting wages (332-338) "0031385" - $313.85 per month
   - k. Wages estimated? (330) "0" - no
   - l. Original time units of wages (340) "1" - hourly
   - m. Wages-in-kind (341) "b̸" - no
   - n. Hours per week (342-343) "40"
   - o. Hours estimated? (344) "b̸" - no
   - p. When job ended (345-348) "5101" - January, 1951
   - q. Ending wages (349-355) "0029061" - $290.61 per month
   - r. Wages estimated? (356) "0" - no
   - s. Original time units of wages (357) "1" - hourly
   - t. Wages-in-kind (ending) (358) "b̸" - none

u. Hours per week (ending) (359-360) "40"

v. Hours estimated? (361) "b̸" - no

w. Employer code (362) "4" - not employed previously by this employer

x. Upon leaving job (363) "1" - not own decision

y. At termination of job (364) "3" - did not have another job and did not enter military

z. Got job through (365) "1" - friend

a.' On-the-job training (366) "0" - not for this job

b.' Information about the training (367-371) "b̸b̸b̸b̸b̸" - not applicable

c.' Union name (372-374) "b̸b̸b̸" - none

4. Fourth entry (375-446) - period of unemployment

a. Variable number (375-376) = 02

b. Beginning date (377-380) = 265

c. Ending date (381-384) = 268

d. Prestige (385-387) "b̸b̸b̸" - none for unemployment

e. Never any full-time employment (392) "1"

f. When period of unemployment started (393-396) "5101" - January, 1951

g. Occupation code (397-399) "900" - unemployment

h. Industry code (400-402) "900" - unemployment

i. Self-employed/owner (403) "b̸" - N/A

j. Starting wage (404-410) "0000000" - zero dollars

k. When period of unemployment ended (417-420) "5104" - April, 1951

l. Ending wages (421-427) "0000000"

5. Fifth entry (447-518) - period of military service

a. Variable number (447-448) = 02

b. Beginning date (449-452) = b268

c. Ending date (453-456) = b292

d. Prestige (457-459) "b̸b̸b̸" - none assigned to military

e. Never any full-time employment? (464) "1"

f. When military service started (465-468) "5104" - April, 1950 (identical with Deck 1, col. 25-28)

g. Occupation code (469-471) "00" - denotes military

h. Industry code (472-474) "-00" - denotes military

i. Self-employed/owner (475) "b̸" - N/A

j. Starting wages (476-482) "b̸b̸b̸b̸b̸b̸b̸" - none assigned to periods of military service

k. When military period ended (489-492) "5304" - April, 1953 (identical with Deck 1, col. 29-32).

l. Ending wages (493-499) - blank - none assigned

m. -c.' Information not applicable (500-518) - blank

6. Sixth entry (519-590) - full-time job

a. Variable number (519-520) = 02

b. Beginning date (521-524) = 292

c. Ending date (525-528) = 298

d. Prestige (529-531) "173" - 17.3

e. Never any full-time employment? (536) "1"

f. Starting date of job (537-540) "5304" - April, 1953

g. Occupation code (541-543) "985" - laborer

h. Industry code (544-546) "218" - tile manufacturing

i. Self-employed/owner (547) "ƀ" - no

j. Starting wages (548-554) "0028136" - $281.36 per month

k. Wages estimated? (555) "1" - yes

l. Original time units of wages (556) "3" - weekly

m. Wages-in-kind? (557) "ƀ" - none

n. Hours per week (558-559) "40"

o. Hours estimated? (560) "ƀ" - no

p. When job ended (561-564) "5310" - October, 1953

q. Ending wages (565-571) "0032825" - $328.25 per month

r. Wages estimated? (572) "1" - yes

s. Original time units of ending wages (573) "3" - weekly

t. Wages-in-kind (ending) (574) "ƀ" - none

u. Hours per week (ending) (575-576) "40"

v. Hours estimated? (577) "ƀ" - no

w. Employer code (578) "4" - not previously employed by this employer

x. Upon leaving job (579) "1" - not own decision

y. At termination of job (580) "3" - did not have another job and did not enter military

z. Got job through (581) "1" - friend

a.' On-the-job training? (582) "0" - no

b.' Information about the training (583-587) - blank

c.' Union name (588-590) "ƀƀƀ" - none

7. Seventh entry (591-660) - full-time job
   - a. Variable number (591-592) = 02
   - b. Beginning date (593-596) = b298
   - c. Ending date (597-600) = b318
   - d. Prestige (601-603) "292" - 29.2
   - e. Never any full-time employment? (608) "1"
   - f. Date job began (609-612) "5310" - October, 1953
   - g. Occupation code (613-615) "343" - shipping clerk
   - h. Industry code (616-618) "398" - graphics industry
   - i. Self-employed/owner (619) "ƀ" - no
   - j. Starting wages (620-626) "0023446" - $234.46 per month
   - k. Wages estimated? (627) "1" - yes
   - l. Original time units of wages (628) "3" - weekly
   - m. Wages-in-kind (629) "ƀ" - none
   - n. Hours per week (630-631) "40"
   - o. Hours estimated? (632 "ƀ" - no
   - p. When job ended (633-636) "5599" - sometime during 1959 - unsure of month
   - q. Ending wages (637-643) "0028136" - $281.36 per month
   - r. Wages estimated (644) "1" - yes
   - s. Original time units of ending wages (645) "3" - weekly
   - t. Wages-in-kind (ending) (646) "ƀ" - none
   - u. Ending hours per week (647-648) "40"
   - v. Hours estimated? (649) "ƀ" - no
   - w. Employer code (650) "4" - not previously employed by this employer
   - x. Upon leaving job (651) "2" - not applicable, i.e. entered service, promotion, or continuing seasonal employment (in this case, it was a promotion)
   - y. At termination of job (652) "6" - not applicable
   - z. Got job through (653) "2" - family
   - a.' On-the-job training (654) "0" - no
   - b.' Information about training (655-657) - blank
   - c.' Union name (658-660) "ƀƀƀ" - none

8. Eighth entry (663-734) - full-time job
   - a. Variable number (663-664) = 02
   - b. Beginning date (665-668) = ƀ318

c. Ending date (669-672) = b332

d. Prestige (673-675) "234" - 23.4

e. Never any full-time employment (680) "1"

f. Starting date of job (681-684) "5599" - during 1955 at some unknown month

g. Occupation (685-687) "350" - inventory clerk

h. Industry (688-690) "398" - graphics

i. Self-employment/owner (691) "ƀ" - no

j. Starting wages (692-698) "0035170" - $351.70 per month

k. Wages estimated? (699) "0" - no

l. Original time units of wages (700) "3" - weekly

m. Wages-in-kind (701) "ƀ" - none

n. Starting hours per week (702-703) "40"

o. Hours estimated (704) "ƀ" - no

p. When job ended (705-708) "5608" - August, 1956

q. Ending wages (709-715) "0039270" - $392.70 per month

r. Wages estimated (716) "0" - no

s. Original time units of ending wages (717) "3" - weekly

t. Wages-in-kind (ending) (718) "ƀ" - none

u. Ending hours per week (719-720) "40"

v. Hours estimated (721) "ƀ" - no

w. Employer code (722) "1" - same as employer of last coded full-time job

x. Upon leaving job (723) "2" - not applicable; in this case, R received another promotion

y. At termination of job (724) "6" - not applicable

z. Got job through (725) "7" - not applicable

a.' On-the-job training? (726) "0" - no

b.' Information about training (727-731) - blank

c.' Union name (732-734) "ƀƀƀ" - none

9. Ninth Entry (735-806) - full-time job

a. Variable number (735-736) = 02

b. Beginning date (737-740) = 332

c. Ending date (741-744) = 405

d. Prestige (745-747) "605" - 60.5

e. Never any full-time employment (752) "1"

f. When job began (753-756) "5608" - August, 1956

g. Occupation code (757-759) "290" - supervisor - clerical

h. Industry code (760-762) "398" - graphics

i. Self-employed/owner (763) "b̸" - no

j. Starting wages (764-770) "0057750" - $577.50 per month

k. Wages estimated? (771) "0" - no

l. Original time units of starting wages (772) "3" - weekly

m. Wages-in-kind (773) "b̸" - none

n. Starting hours per week (774-775) "40"

o. Hours estimated (776) "b̸" - no

p. When job ended (777-780) "6209" - September, 1962

q. Ending wages (781-787) "0075901" - $759.01 per month

r. Wages estimated (788) "0" - no

s. Original time units of ending wages (789) "5" - monthly

t. Wages-in-kind (ending) (790) "b̸" - none

u. Ending hours per week (791-792) "40"

v. Hours estimated (793) "b̸" - no

w. Employer code (794) "1" - same as employer of last full-time job

x. Upon leaving job (795) "0" - own decision

y. At termination of job (796) "1" - had new job

z. Got job through (797) "F" - N/A - in this case, a promotion

a.' On-the-job training (798) "0" - no

b.' Information about training (799-803) - blank

c.' Union name (804-806) "b̸b̸b̸" - none

10. Tenth entry (807-878) - full-time job

a. Variable number (807-808) = 02

b. Beginning date (809-   ) = 405

c. Ending date (813-816) = 472

d. Prestige (817-819) "605" - 60.5

e. Never any full-time employment (824) "1"

f. When job began (825-828) "6209" - September, 1962

g. Occupation code (829-831) "290" - supervisor-clerical (office manager)

h. Industry (832-834) "398" - graphics

i. Self-employed/owner (835) "b̸" - no

j. Starting wages (836-842) "0075901" - $759.01 per month

k. Wages estimated (843) "b̸" - no

l. Original time units of wages (844) "5" - monthly

m. Wages-in-kind (845) "b̸" - none

n. Starting hours per week (846-847) "40"

o. Hours estimated (845) "b̸" - no

p. When job ended (849-852) "6804" - April, 1968

q. Ending wages (853-859) "0082508" - $825.08 per month

r. Wages estimated (860) "0" - no

s. Original time units of ending wages (861) "5" - monthly

t. Ending wages-in-kind (862) "b̸" - none

u. Ending hours per week (863-864) "40"

v. Hours estimated ([illegible]5) "b̸" - no

w. Employer code (866) "4" - not previously employed by this employer

x. Upon leaving job (867) "0" - own decision

y. At termination of job (868) "1" - had new job

z. Got job through (869) "1" - friend

a.' On-the-job training (870) "0" - no

b.' Information about training (871-875) = blank

c.' Union name (876-878) "b̸b̸b̸" - none

11. Eleventh entry (879- 950) full-time job

a. Variable number (879-880) = 02

b. Beginning date (881-884) = b472

c. Ending date (885-888) = b481

d. Prestige (889-891) "605" - 60.5

e. Never any full-time employment (896) "1"

f. When job began (897-900) "6804" - April, 1968

g. Occupation code (901-903) "290" - office manager

h. Industry (904-906) "398" - graphics

i. Self-employed/owner (907) "b̸" - no

j. Starting wages (908-914) "0057755" - $577.55 per month

k. Wages estimated (915) "0" - no

l. Original time units of wages (916) "5" - monthly

m. Wages-in-kind (917) "b̸" - none

n. Starting hours per week (918-919) "50"

o. Hours estimated (920) "1" - yes

p. When job ended (921-924) "6901" - January, 1969 - always inserted as ending date of job held at interview

q. Ending wages (925-931) "0057755" - $577.55 per month

r. Wages estimated (932) "0" - no

s. Original time units of ending wages (933) "5" - monthly

t. Ending wages-in-kind (934) "ƀ" - none

u. Ending hours per week (935-936) "50"

v. Hours estimated (937) "1" - yes

w. Employer code (938) "4" - not previously employed by this employer

x. Upon leaving job (939) "2" - N/A - current job

y. At termination of job (940) "6" - N/A

z. Got job through (941) "6" - other than friends, family, agency or ad

a.' On-the-job training (942) "0" - no

b.' Information about training (943-947) - blank

c.' Union name (948-950) "bbb" - none

F. Part-time employment - Var. 03 - as for full-time jobs, there are 31 words required for each job held

Word 1. First entry

1 a. Variable number (951-952) = 03

2 b. Beginning date (953-956) = b199

3 c. Ending date (957-968) = b249

4 d. Prestige (961-963) "218" = 21.8

5 e. Never any part-time employment (968) "1" - R has had part-time employment

6 f. When job began (969-972) "4507" - July, 1945

7 g. Occupation (973-975) "835" - dishwasher

8 h. Industry (976-978) "316" - bakery

9 i. Self-employed/owner (979) "ƀ" - no

10 j. Starting wages (980-986) "0006441" - $64.41 per month, price adjusted to 1959 dollars

11 k. Wages estimated (987) "0" - no

12 l. Original time units of wages (988) "1" - hourly

13 m. Wages-in-kind (989) "ƀ" - none

14 n. Hours per week (990-991) "18"

15 o. Estimate or overtime (992) "ƀ" - no

16 p. When job ended (993-996) "4909" - September, 1949

17 q. Ending wages (997-1003) "0005851" - $58.51 per month, price adjusted to 1959 dollars

Word

18 r. Ending wages estimated? (1004) "0" - no

19 s. Original time units of ending wages (1005) "1" - hourly

20 t. Wages-in-kind (ending) (1006) "ƀ" - none

21 u. Ending hours per week (1007-1008) "18"

22 v. Estimate or overtime (1009) "ƀ" - no

23 w. Employer (1010) "9" - not previously employed by this employer

24-30 x. (1011-1019) - always blank

31 y. Union name (1020-1022) "ƀƀƀ" - none

G. Variable number 17 - marriage

Word 1. First entry

1 a. Variable number (1023-1024) = 17

2 b. Beginning date (1025-1028) = "b281"

3 c. Ending date (1029-1032) = "b481"

4 d. Subsequent marital status (1033) = "2" = married

5 e. Age of wife at marriage (1034-1035) = "22"

H. Variable number 27 - children

Word 1. First entry

1 a. Variable number (1036-1037) = 27

2 b. Beginning date (1038-1041) = "b291"

3 c. Ending date (1042-1045) = "b307"

4 d. Never any children? (1046) = "1" - R has children

5 e. Date of change in number of children in R's household (1047-1050) "5303" - March, 1953

6 f. Event (1051) "1" - birth

7 g. Number of child to which event refers (1052-1053) "01"

8 h. Marriage number (1054) "1"

2. Second Entry

a. Variable number (1055-1056) = 27

b. Beginning date (1057-1060) = 307

c. Ending date (1061-1064) = 356

d. Never any children (1065) "1"

e. Date of change in no. of children (1066-1069) "5407" - July, 1954

f. Event (1070) "1" - birth

g. Child number (1071-1072) "02"

h. Marriage number (1073) "1"

3. Third entry

a. Variable number (1074-1075) = 27

b. Beginning date (1076-1079) = b356

c. Ending date (1080-1083) = b390

d. Never any children? (1084) "1"

e. Date of change (1085-1088) "5808" - August, 1958

f. Event (1089) "1" - birth

g. Child no. (1090-1091) "03"

h. Marriage no. (1092) "1"

4. Fourth entry

a. Variable number (1093-1094) = 27

b. Beginning date (1095-1098) = "b390"

c. Ending date (1099-1102) = "b481"

d. Never any children (1103) "1"

e. Date of change (1104-1107) "6106" - June, 1961

f. Event (1108) "1" - birth

g. Child no. (1109-1110) "04"

h. Marriage no. (1111) "1"

I. Variable number 37 - birth control

Word 1. First entry

1 a. Variable number (1112-1113) = 37

2 b. Beginning date (1114-1117) = "b281"

3 c. Ending date (1118-1121) = "b481"

4 d. Marriage number (1122) "1"

5 e. Date of birth control change (1123-1126) "5205" - May, 1952 initial entry is always date of marriage

6 f. Birth control? (1127) "0" - no

J. Variable 10 - household composition

Word 1. First entry

1 a. Variable number (1128-1129) = 10

2 b. Beginning date (1130-1133) = "b168"

3 c. Ending date (1134-1137) = "b246"

4 d. Household composition code (1138-1139) 27 - father + mother + siblings

5 e. Date of change in composition (1140-1143) "4399" - 1943, month unknown - first entry is always at or near R's fourteenth birthday

f. Who present (1144-1147) - there is a 2-character code for each person present in the household, up to 12 people, excluding the respondent

Word

6 1) First entry (1144-1145) "01" - father

7 2) Second entry (1146-1147) "02" - mother

8 3) Third entry (1148-1149) "51" - one brother

18 g. Number of persons in household, excluding R (1168-9) "03"

2. Second entry
    - a. Variable number (1170-1171) = 10
    - b. Beginning date (1172-1175) = "b246"
    - c. Ending date (1176-1179) = "b268"
    - d. Household composition code (1180-1181) "04" - father + mother
    - e. Date of change (1182-1185) "4999" - 1949, month unknown
    - f. Who present (1186-1189)
        - 1) First entry (1186-1187) "01" - father
        - 2) Second entry (1188-1189) "02" - mother
    - g. No. of persons in household (1210-1211) "02"
3. Third Entry
    - a. Variable number (1212-1213) = 10
    - b. Beginning date (1214-1217) = 268
    - c. Ending date (1218-1221) = 292
    - d. Household composition code (1222-1223) "99" - Armed Services
    - e. Date of change (1224-1227) "5104" - April, 1951
    - f. Who present (1228-1229)
        - 1) First entry (1228-1229) "40" - military barracks
    - g. No. of persons in household (1252-1253) "98" - group living
4. Fourth entry
    - a. Variable number (1254-1255) = 10
    - b. Beginning date (1256-1259) = "b292"
    - c. Ending date (1260-1263) = "b297"
    - d. Household composition code (1264-1265) "84" - Wife + Parent(s) - in-law + sibling(s) - in-law ± kid(s)
    - e. Date of change (1266-1269) "5304" - April, 1953
    - Who present (1270-1271)
        - 1) First entry (1270-1271) "07" - wife
        - 2) Second entry (1272-1273) "10" - father-in-law
        - 3) Third entry (1274-1275) "12" - brother-in-law
        - 4) Fourth entry (1276-1277) "81" - one daughter

- f. No. of persons in household (1294-1295) "04"

5. Fifth entry
    - a. Variable number (1296-1297) = 10
    - b. Beginning date (129801301) = "b297"
    - c. Ending date (1302-1305) = "b307"
    - d. Household composition (1306-1307) "73" - wife + kid(s)
    - e. Date of change (1308-1311) "5309" - September, 1953
    - f. Who present (1312-1315)
        - 1) First entry (1312-1313) "07" - wife
        - 2) Second entry (1314-1315) "81" - one daughter
    - g. No. of persons in household (1336-1337) "08" NOTE: INCORRECT ON TAPE
6. Sixth entry
    - a. Variable number (1338-1339) = 10
    - b. Beginning date (1340-1343) = "b307"
    - c. Ending date (1344-1347) = "b356"
    - d. Household composition (1348-1349) "73" - wife + kid(s)
    - e. Date of change (1350-1353) "5407" - July, 1954
    - f. Who present (1354-1357)
        - 1) First entry (1358-1359) "07" - wife
        - 2) Second entry (1360-1361) "82" - two daughters
    - g. No. of persons in household (1378-1379) "09" NOTE: INCORRECT ON TAPE
7. Seventh entry
    - a. Variable number (1380-1381) = 10
    - b. Beginning date (1382-1386) = "356"
    - c. Ending date (1387-1390) = "390"
    - d. Household composition (1391-1392) "73" - wife + kid(s)
    - e. Date of change (1393-1396) "5808" - August, 1958
    - f. Who present (1397-1402)
        - 1) First entry (1397-1398) "07" - wife
        - 2) Second entry (1399-1400) "71" - one son
        - 3) Third entry (1401-1402) "82" - two daughters
    - g. No. of persons in household (1420-1421) "04"
8. Eighth entry
    - a. Variable number (1422-1423) = 10
    - b. Beginning date (1424-1427) = "b391"
    - c. Ending date (1428-1431) = "b481"

d. Household composition (1432-1433) "73" - wife + kid(s)

e. Date of change (1434-1437) "6106" - June, 1961

f. Who present (1438-1443)

1). First entry (1438-1439) "07" - wife

2) Second entry (1440-1441) "72" - two sons

3) Third entry (1442-1443) "82" - two daughters

g. No. of persons in household (1462-1463) "05"

K. Wife's occupation - variable 09. There is a 28 word entry for each job the wife held, whether full-time or part-time.

Word

1. First job (1464-1523)

1 a. Variable number (1464-1465) = "09"
2 b. Beginning date (1466-1469) = "281" - marriage date
3 c. Ending date (1470-1473) = "282"
4 d. Prestige (1474-1476) "413" - 41.3
5 e. Respondent never married? (1481) "1" - R has been married
6 f. When job began (1482-1485) "5205" - May, 1952
7 g. Occupation (1486-1488) "360" - typing supervisor
8 h. Industry (1489-1491) "726" - insurance
9 i. Self-employed/owner (1492) "ƀ" - no
10 j. Starting wages (1493-1499) "ƀƀƀƀƀƀƀ" - unknown
11 k. Wages estimated (1500) "9" - N/A
12 l. Original time units of wages (1501) "9" - N/A
13 m. Wages-in-kind (1502) "ƀ" - none
14 n. Hours per week (1503-1504) "38"
15 o. Estimate or overtime (1505) "1" - estimate of hours
16 p. When job ended (1506-1509) "5299" - 1952, month unknown
17 q. Ending wages (1510-1516) "ƀƀƀƀƀƀ" - unknown
18 r. Wages estimated? (1517) "9" - N/A
19 s. Original time units of wages (1518) "9" - N/A
20 t. Ending wages-in-kind (1519) "ƀ" - none
21 u. Ending hours per week (1520-1521) "38"
22 v. Estimate or overtime? (1522) "1" - estimate of hours
23 w. Wife number (1523) "1" - first wife

2. Second job (1524-1583)

a. Variable number (1524-1525) = 09

b. Beginning date (1526-1529) = "b458"

c. Ending date (1530-1533) = "b470"

   d. Prestige (1534-1536) "610" = 61.0
   e. Resp. never married? (1541) "1"
   f. Date job began (1542-1545) "6702" - Feb., 1967
   g. Occupation (1546-1548) "185" - lab. technician
   h. Industry (1549-1551) "868" - hospital
   i. Self-employed/owner (1552) "0" - no
   j. Starting wage (1553-1559) "0030134" - $301.34 per month
   k. Wages estimated? (1560) "0" - no
   l. Original time units of wages (1561) "3" - weekly
   m. Wages-in-kind (1562) "0" - none
   n. Hours per week (1563-1564) "40"
   o. Estimate or overtime (1565) "0" - no
   p. When job ended (1566-1569) "6802" - Feb., 1968
   q. Ending wages (1570-1576) "0028915" - $289.15 per month, price-adjusted
   r. Wages estimated? (1577) "0" - no
   s. Original time-units of ending wages (1578) "3" - weekly
   t. Ending wages-in-kind (1579) "0" - none
   u. Ending hours/week (1580-1581) "40"
   v. Estimate or overtime? (1582) "0" - no
   w. Wife number (1583) "1"

3. Third job (1584-1643)
   a. Variable number (1584-1585) = 09
   b. Beginning date (1586-1589) = "473"
   c. Ending date (1590-1593) = "481"
   d. Prestige (1594-1596) "292" - 29.2
   e. Resp. never married (1601) "1"
   f. Date job began (1602-1605) "6805" - May, 1968
   g. Occupation (1606-1608) "343" - shipping clerk
   h. Industry (1609-1611) "686" - retail jeweler
   i. Self-employed/owner (1612) "0" - no
   j. Starting wages (1613-1619) "0021687" - $216.87 per month, price-adjusted
   k. Wages estimated? (1620) "0" - no
   l. Original time units of wages (1621) "3" - weekly
   m. Wages-in-kind (1622) "0" - none
   n. Hours per week (1623-1624) "38"
   o. Estimate or overtime (1625) "1" - hours estimated

p. When job ended (or current date) (1626-1629) "6901" - January, 1969 - interview date

q. Ending wages (1630-1636) "0021687 - $216.87 per month, price adjusted

r. Wages estimated? (1637) "0" - no

s. Original time units of wages (1638) "3" - weekly

t. Ending wages-in-kind (1639) "ƀ" - no

u. Ending hours per week (1640-1641) "38"

v. Estimate or overtime? (1642) "1" - hours estimated

w. Wife no. (1643) "1"

L. Variable 11 - Income adequacy

Word 1. First entry

1 a. Variable number (1644-1645) = 11

2 b. Beginning date (1646-1649) = "b174"

3 c. Ending date (1650-1653) = "b481"

4 d. Date of adequacy change (1654-1657) "4399" - sometime in 1943, when R was 14

5 e. Type of adequacy (1658) "2" - comfort, no save

M. Variable 21 - Public support

Word 1. First entry

1 a. Variable number (1659-1660) = 21

2 b. Beginning date (1661-1664) = "b265"

3 c. Ending date (1665-1668) = "b268"

4 d. Never any public support? (1669) = "1" - has had public support

5 e. When support began (1670-1673) "5101" - January, 1951

6 f. When support ended (1674-1677) "5104" - April, 1951

7 g. Amount of public support (1678) "1" - all

8 h. Type of support (1679-1680) "02" - unemployment compensation

2. Second entry

a. Variable number (1681-1682) = 21

b. Beginning date (1683-1686) = "b235"

c. Ending date (1687-1690) = "b268"

d. Never any public support? (1691) "1"

e. When support began (1692-1695) "5401" - January, 1954

f. When support ended (1696-1699) "6012" - December, 1960

g. Amount of public support (1700) "4" - less than half

h. Type of support (1701-1702) "04" - G.I. Bill of Rights

NOTE: RESPONSES d-h ARE INCORRECT FOR PERSON 4.

N. Variable 12 - Home details

Word 1. First entry

1 a. Variable number (1703-1704) = 12

2 b. Starting date (1705-1708) = "b174"

3 c. Ending date (1709-1712) = "b235"

4 d. When moved into dwelling unit (1713-1716) "4399" sometime in 1943, when R was 14 - 1st entry always for age 14

5 e. Type of housing (1717-1718) "02" - house

6 f. Number of rooms (1719-1720) "07"

7 g. Own, rent (1721) "2" - rent

8 h. Neighborhood composition (1722) "1" - all white

9 i. Major non-white ethnicity of area (1723) "1" - white

10-11 j. Neighborhood composition at departure - or change during residence (1724-1725) "ƀƀ" - no change

2. Second entry

a. Variable number (1726-1727) = 12

b. Starting date (1728-1731) = "b235"

c. Ending date (1732-1735) = "267"

d. When moved in (1736-1739) "4807" - July, 1948

e. Type of housing (1740-1741) "02" - house

f. Number of rooms (1742-1743) "06"

g. Own, rent (1744) "2" - rent

h. Neighborhood composition (1745) "1" - all white

i. Non-white ethnicity (1746) "1" - white

j. Change in neighborhood composition (1747-1748) "ƀƀ" - none

3. Third entry

a. Variable number (1749-1750) = 12

b. Starting date (1751-1754) = 267

c. Ending date (1755-1758) = 268

d. When moved in (1759-1762) "5103" - March, 1951

e. Type of housing (1763-1764) "02" - house

f. Number of rooms (1765-1766) "06"

g. Own/rent (1767) "9" - unknown

h. Neighborhood composition (1768) "1" - all white

i. Non-white ethnicity (1769) "1" - white

j. Change in composition (1770-1771) "ƀƀ" - none

4. Fourth entry

   a. Variable number (1772-1773) = 12
   b. Starting date (1774-1777) = "b268"
   c. Ending date (1778-1781) = "b292"
   d. When moved in (1782-1785) "5104" - April, 1951
   e. Type of housing (1786-1787) "09" - barracks
   f. Number of rooms (1788-1789) "98" - indicates military, not specific number of rooms
   g. Own/rent (1790) "9" - Military
   h. Neighborhood composition (1791) "9" - N/A
   i. Non-white ethnicity (1792) "9" - N/A
   j. Change in neighborhood composition (1793-1794) "00" - none

5. Fifth entry
   a. Variable number (1795-1796) = 12
   b. Starting date (1797-1800) = "b292
   c. Ending date (1801-1804)
   d. When moved in (1805-1808) "5304" - April, 1953
   e. Type of housing (1809-1810) "02" - house
   f. Number of rooms (1811-1812) "08"
   g. Own/rent (1813) "3" - share without paying rent
   h. Neighborhood composition (1814) "1" - all white
   i. Non-white ethnicity (1815) "1" - white
   j. Change in neighborhood composition (1816-1817) "00" - no change
6. Sixth entry
   a. Variable number (1818-1819) = 12
   b. Starting date (1820-1823) = "b297"
   c. Ending date (1824-1827) = "b407"
   d. When moved in (1828-1831) "5309" - September, 1953
   e. Type of housing (1832-1833) "03" - duplex
   f. Number of rooms (1834-1835) "06"
   g. Own/rent (1836) "2" - rent
   h. Neighborhood composition (1837) "1" - all white
   i. Non-white ethnicity (1838) "1" - white
   j. Change in composition (1839-1840) "00" - none
7. Seventh Entry
   a. Variable number (1841-1842) = 12
   b. Starting date (1843-1846) = "b407"

c. Ending date (1847-1850) "b481"

d. When moved in (1851-1854) "b211" - November, 1962

e. Type of housing (1855-1856) "02" - house

f. Number of rooms (1857-1858) "06"

g. Own/rent (1859) "1" - own

h. Neighborhood composition (1860) "1" - all white

i. Non-white ethnicity (1861) "1" - white

j. Change in neighborhood composition (1862-1863) "ƀƀ" - none

O. Variable 13 - Residence

Word 1. First entry

1 a. a. Variable number (1864-1865) = 13

2 b. Starting date (1866-1869) = "b168"

3 c. Ending date (1870-1873) = "b268"

4 d. Date of change (1874-1877) "4399" - sometime in 1943 when R was 14 - always 1st entry

e. Location (1878-1887)

5 1) City/town (1878-1880) "888" - town

6 2) State (1881-1882) "22" - Massachusetts

7 3) SEA (1883-1884) "09" - NOTE: SEA CODES NOT TRANSLATED TAPE B

8 4) County (1885-1887) "011" - Norfolk

9 f. Farm or career military? (1888) "ƀ" - not applicable

2. Second entry

a. Variable number (1889-1890) = 13

b. Starting date (1891-1894) = "b268"

c. Ending date (1895-1898) = "b292"

d. Date of change (1899-1902) "5104" - April, 1951

e. Location

1) City/Town (1903-1905) "999" - military location

2) State (1906-1907) "55"

3) SEA (1908-1909) "ƀƀ"

4) County (1910-1912) "ƀƀƀ"

f. Farm or career military (1913) "ƀ" - N/A

3. Third entry

a. Variable number (1914-1915) = 13

b. Starting date (1916-1919) = "b292"

c. Ending date (1920-1923) = "b481"

d. Date of change (1924-1927) "5304" - April, 1953

e. Location (1928)
  1) City/town (1928-1930) "888" - town
  2) State (1931-1932) "22" - Massachusetts
  3) SEA (1933-1934) "09" - NOT CODED/TAPE B
  4) County (1935-1937) "011" - Norfolk

f. Farm or career military? (1938) "b̸" - N/A

TAPE B

II. Static Information

Word	Description
1	a. ID number (644-647) "0004"
2	b. Date of leaving home (654-656) "268" - calendar month when R's household composition first indicates no elders present in household or R's wife present in household, whichever comes first. This 3-digit calendar month is based on January, 1929 = 001, so that R left home 267 months after January, 1929, or in April of 1951 (see Year-Month Conversion Chard in Codebook - p. 96).
3	c. Age at interview (657-658) "39" - R's age in years
	d. Birthdate
4	1) Year (659-660) "29" - 1929
5	2) Month (661-662) "12" - December
6	3) Day (663-664) "25" - the 5th day of the month
7	e. Type of military service (665) "1" - one period of active military
	f. Date of start of active service
8	1) Year (666-667) "51"
9	2) Month (668-669) "04"
	g. Discharge date
10	1) Year (670-671) "53"
11	2) Month (672-673) "04"
12	h. Drafted/enlisted (674) "0" - drafted
13	i. Entering rank (675-676) "31" - Army Private
14	j. Final discharge rank (677-678) "34" - Corporal
	k. Location of place where R was stationed longest
15	1) City/town (679-681) "002" - Japan
16	2) State (682-683) "70" - Asia
17	3) SEA (684-685) "b̸b̸" - not applicable to foreign locations
18	4) County (686-688) "b̸b̸b̸" - not applicable
	l. Location of place where R was discharged
19	1) City/town (689-691) "888" - town of under 25,000 population
20	2) State (692-693) "22" - Massachusetts
21	3) SEA (694-695) "09" - Boston - Lawrence-Lowell Metropolitan area. NOTE: NOT RECODED ON TAPE B

22 4) County (696-698) "009" - Fall River
(Above is coding for Ft. Devons, Mass.)

23 m. Military diploma/degree/course (699-701) "000" - none

24 Ignore

25 n. Calendar time of ELF (Entry into Labor Force) (702-705) "0245" - May, 1949 - this is the date when the respondent first leaves full-time school and is our for at least 16 months (i.e. more than one year plus one summer)

26 o. Total number of siblings (706-707) "02" - sum of brothers and sisters

27 p. Date of first marriage (708-710) "281" - May, 1952

28 q. Calendar month of birth (711-713) "012" - December, 1929 (see d above)

29 r. Calendar month of entry into military (714-717) "ƀ268" - April, 1951 (see f above)

30 s. Calendar month of military discharge (718-721) "ƀ292" - April, 1953 (see g above)

31 t. Race of respondent (722) "1" - white

32 u. Adjusted verbal ability test score (724-725) "06" on a scale of 01-10

v. Place of birth

33 1) City/town (728-730) "003" - Boston

34 2) State (731-732) "22" - Massachusetts

35 3) SEA (733-734) "ƀƀ" - always blank for cities

36 4) County (735-737) "ƀƀƀ" - always blank for cities

37 w. Year of entry to U.S. (738-739) "ƀƀ" - always blank if R born in U.S.

38 x. Number of brothers (740-741) "02"

39 y. Number of sisters (742-743) "00"

40 z. Father or substitute's education (744-745) "58" - grammar school diploma (8th grade)

41 a.' Above education for whom? (746) "1" - father

42 b.' Mother's education (747-748) "58" - 8th grade

43 c.' Above education for whom? (749) "1" - mother

44 d.' Father's occupation (750-752) "411" - 1960 Census Code for Shipbuilder

45 e.' Father's industry (753-755) "269" - 1960 Census Code for Shipyard

46 f.' Father self-employed/owner (756) "b̸" - no

47 g.' Above occupation of whom? (757) "1" - father

48 h.' Mother's occupation (758-760) "900" - housewife

49 i.' Mother's industry (761-763) "900" - housewife

50 j.' Family happiness - at R's age 14 (764) "1" - very happy

51 k.' Mother's nationality (765-766) "11" - Canada, French

52 l.' Father's nationality (767-768) "18" - England

53 m.' Religion of origin (769-770) "36" - Episcopalian

54 n.' Religion changed to (771-772) "00" - no change

55 o.' Year of change (773-774) "9" - not applicable

56 p.' For whom voted in last presidential election? (775) "1" - Nixon

57 q.' Year of first vote (776-777) "53" - 1953

r.' Verbal ability

58 1) Answer given for "space" (778) "4" - "room"

59 2) Answer given for "broaden" (779) "5" - "widen"

60 3) Answer given for "caprice" (780) "5" - "inducement"

61 4) Answer given for "edible" (781) "3" - "fit to eat"

62 5) Answer given for "animosity" (782) "1" - "hatred"

63 6) Answer given for "pact" (783) "3" - "agreement"

64 7) Answer given for "cloistered" (784) "2" - bunched

65 8) Answer given for "emanate" (785) "3" - "prominent"

66 9) Answer given for "accustom" (786) "2" - "get used to"

67 10) Answer given for "allusion" (787) "2" - "dream"

68 11) Who read words (788) "1" - R read words himself

69 12) Number of correct answers to verbal ability test (790-791) "06"

70 s.' Prestige score for father's occ/ind (792-794) "399" NORC score - 1 decimal place assumed

71 t.' Prestige score for mother's occ/ind (795-797) "b̸b̸b̸" - none available for housewife

72 u.' Calendar month of FFTJ (first full-time civilian job after last leaving full-time education) (798-801) "ƀ249" - September, 1949 - this is beginning date of first full-time civilian job after R last leaves full-time education. If R is career military, this is the date of his entry into the military.

73 v.' Date of last leaving full-time education (802-805) "ƀ245" - May, 1949

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